

Receiving Report

Date: 14/12/28

Batch No: M 125813

Supplier: BKAWO

Dart P/O: 23160

Packing Slip: Yes C No ✓
 Invoice: Yes ✓ No ✓
 Receipt: Cash ✓ Cr ✓
 New Supplier Yes ✓ No ✓

Release Note Attached: Yes ✓ No ✓ N/A ✓
 Waybill Attached: Yes ✓ No ✓
 Shipment Complete: Yes ✓ No ✓ N/A ✓
 QC18 Inspection ✓ N/A ✓
 Work Order ✓ N/A ✓

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Rec'd	Quantity Short	Quantity Inspected	Quantity Rejected	Comment / NCR Number
<u>M024694-148</u>		<u>10</u>	<u>2</u>	<u>10</u>			

Initials of Receiver

QC12

Production/Admin:

Date

Received/Costing

Initial

Location



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO25150

Purchase Order Date 7/24/2014

PO Print Date 7/24/2014

Page Number 1 of 7

Order From :

VU-BEA001

Ship To : DART AEROSPACE LTD

B/E AEROSPACE INC
88289 EXPEDITE WAY
CHICAGO, IL 33172
USA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED

Contact Name

Vendor Phone 305-925-2600

Ship To Contact

Ship To Phone

Ship Via: Fedex P1

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

M129913

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	AN310-4 331	Nut	7/29/2014 Yes 7/29/2014	FN	75.00 Each ✓	\$0.65	\$48.75
Line Total:							\$48.75
2	AN3C5A 350	Bolt	7/29/2014 Yes 7/29/2014	FN	200.00 Each ✓	\$0.34	\$68.00
Line Total:							\$68.00
3	AN6-41A 333	Bolt	7/29/2014 Yes 7/29/2014	FN	30.00 Each ✓	\$2.60	\$78.00

7/24/2014

Note:

7/24/2014



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Page Number 2 of 7

Order From :

B/E AEROSPACE INC
88289 EXPEDITE WAY
CHICAGO, IL 33172
USA

VU-BEA001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

305-925-2600

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Fedex P1

Ship Acct:

Buyer

Chantal Lavoie

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FOB

FCA - (Free Carrier)

Line Total: \$78.00

4 AN814-4DL

PLUG

7/29/2014 FN

10.00

\$2.27

\$22.70

No

Each

7/29/2014

Line Total: \$22.70

5 AN816-6D

Nipple-M-6Flare -1/4NPT

7/29/2014

8.00

\$2.57

\$20.56

Yes

Each

7/29/2014

Line Total: \$20.56

6 AN818-6D

Nut

7/29/2014

30.00

\$0.90

\$27.00

Yes

Each

7/29/2014

Line Total: \$27.00

Note:

7/24/2014

Pay 7/28



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305-925-2600

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Ship To Phone

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Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

7 CR3213-4-03

rivet

7/29/2014

Yes

7/29/2014

100.00

Each

\$0.35

\$35.00

Line Total:

\$35.00

8 CR3213-4-5

Rivet

7/29/2014 FN

Yes

7/29/2014

300.00

Each

\$0.35

\$105.00

Line Total:

\$105.00

9 MS21062-3K

Nut Plate

7/29/2014

Yes

7/29/2014

50.00

Each

\$1.66

\$83.00

Line Total:

\$83.00

10 MS21075L3N

NUT PLATE

7/29/2014

Yes

7/29/2014

300.00

Each

\$0.40

\$120.00

Note:

7/24/2014



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Ship To Phone

Ship Via:

Fedex P1

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

Line Total: \$120.00

11 MS21059L3K

Nutplate

7/29/2014

Yes

7/29/2014

400.00

Each

\$0.67

\$268.00

Line Total: \$268.00

12 MS21060-3K

Nut Plate

7/29/2014

Yes

7/29/2014

100.00

Each

\$1.37

\$137.00

Line Total: \$137.00

13 MS24694-S148

SCREW

8/29/2014

Yes

8/29/2014

15.00

Each

\$8.40

\$126.00

Line Total: \$126.00

Note:

7/24/2014



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Purchase Order ID **PO25150**

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PO Print Date 7/24/2014

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1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

305-925-2600

Ship To Contact

Ship To Phone

Ship Via:

Fedex P1

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

14 NAS1149D0663J

Washer

7/29/2014 FN

600.00

\$0.05

\$30.00

Yes

Each

7/29/2014

Line Total:

\$30.00

15 NAS1330C3KB116

Rivnut

7/29/2014 FN

16.00

\$2.47

\$39.52

Yes

Each

7/29/2014

Line Total:

\$39.52

16 NAS1473R3

Anchor Nut

7/29/2014

125.00

\$4.97

\$621.25

Yes

Each

7/29/2014

Line Total:

\$621.25

17 NAS1835-08

Insert

7/29/2014 FN

60.00

\$1.57

\$94.20

Yes

Each

7/29/2014

Note:

7/24/2014

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PO Print Date 7/24/2014

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Ship To Phone

Ship Via: Fedex P1

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency USD

FOB FCA - (Free Carrier)

Line Total: \$94.20

18 NAS509-6C

Nut

7/29/2014 FN

12.00

Yes

Each

\$5.50

\$66.00

7/29/2014

Line Total: \$66.00

19 NAS391B6P

Washer

7/29/2014

100.00

Yes

Each

\$0.25

\$25.00

7/29/2014

Line Total: \$25.00

20 NAS679A06W

NUT

7/29/2014

10.00

Yes

Each

\$1.50

\$15.00

7/29/2014

Line Total: \$15.00

Note:

7/24/2014



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Terms Net 30

Currency USD

FOB FCA - (Free Carrier)

21	MS20470AD5-4	Rivet	7/29/2014	1,500.00	\$0.01	\$17.50
			Yes	Each		
			7/29/2014			

Line Total: \$17.50

22	71401-45	PROCUREMENT QUALITY CLAUSES	7/29/2014	1.00	\$0.00	\$0.00
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No

7/29/2014

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A032 PUBLIC LAW 101-592 FASTENER QUALITY ACT

A033 STATEMENT OF CONFORMITY/TEST RECORDS

FOR NAS, AN and MS FASTENERS

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

Line Total: \$0.00

PO Total: \$2,047.48

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 1

Change Date: 7/24/2014



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO25150

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR	D/TE	EXP DATE
17	60	EA	NAS1835-08		MIL0260	SHUR-LOK CORPORATION	97393			


Jason Lewis
Vice President of Quality

07/25/14



SHUR-LOK COMPANY

SPS Fastener Division, a SPS Company

2541 White Road, Irvine CA 92614
Tel. (949) 474-6000 Fax. (949) 660-8601
WWW.SHUR-LOK.COM

Certificate of Compliance

CUSTOMER B/E AEROSPACE CONSUMABLES

CUSTOMER P.O. NO. 0PKR42

SHUR-LOK
SALES
ORDER C 87167

CUSTOMER PART NO. NAS1835-08

SHUR-LOK
PART NO. SL606-08S

REV 8

REV P

LOT NO. MIL0260

TOTAL QTY
SHIPPED 19,122

Notes:

DFARS 252.225.7009 APPLIES

SHUR-LOK COMPANY certifies that the above noted part number was manufactured and inspected in accordance with the applicable purchase order, drawing, specifications, and any other requirements invoked thereon.

The materials and/or parts furnished under the above purchase order were produced either from materials furnished by the Buyer for the production of such parts, or from materials for which the Seller has available for examination, chemical and/or physical test reports or other evidence of conformance.

The SLC Part Number, Revision letter and/or Lot Number listed on this certification may not reflect the part number, revision letter and/or lot number listed on the Processing Certification(s) and/or other paperwork attached to this Certification. The identification listed on this certification is the identification of the SLC Sales drawing at the time of manufacture and may not coincide with the manufacturing drawing(s) and/or revision letter(s) used to manufacture and process the part(s). Traceability to the identification listed on this certification is maintained and guaranteed.

When applicable, the parts contained in this shipment have been manufactured and inspected in accordance with TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards set in the manufacturer's design. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Fasteners of similar dimensional properties may have widely varying performance and metallurgical properties. Substitution of parts may only be done if acceptable to or approved by the Administrator.

6/29/2013

Date

Bertha Albarado
Authorized Representative

MIL0260

NUCOR**NUCOR CORPORATION
NUCOR COLD FINISH UTAH****Mill Certification
7/11/2012**1875 West Highway 13 South
BRIGHAM CITY, UT 84302
(435) 734-9334
Fax: (435) 734-4581Sold To: BRALCO METALS #43
15090 NORTHAM ST
LA MIRADA, CA 90638-0000
(714) 736-4800
Fax: (714) 736-4840Ship To: BRALCO METALS #43
15090 NORTHAM ST
LA MIRADA, CA 90638-0000
(714) 736-4800
Fax: (714) 736-4840

Customer P.O.	43-103408	Sales Order	513360.2
Product Group	Cold Finish Bar	Part Number	332534
Grade	12L14 ASTM A108-07	Lot #	B1106731
Size	Round 0.6875 (.0020)	Heat #	AR293663 ✓
Product	RD 0.6875" 12L14HD 12-R CD.GR ✓	B.L. Number	B1-405214
Description	CF Grade 12L14HD (Heavy Draft) ✓	Load Number	B1-104871
Customer Spec		Customer Part #	332534

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Part Detail: RD 0.6875" 12L14HD 12-R Cold Drawn Ground
Process: Cold Drawn, Ground

C	Mn	P	S	Si	Cu	Cr	Ni	Mo	Sn	V	Cb
0.08%	0.96%	0.060%	0.290%	0.00%	0.25%	0.07%	0.08%	0.020%	0.000%	0.0000%	0.000%
Al	Pb										
0.000%	0.310%										

Country of Melting: USA ✓

Reduction Ratio 94 :1

Country of Rolling: USA

Yield Strength: 88900 PSI ✓

Tensile Strength: 91000 PSI ✓

Elongation: 9.4 % in 2" (% in 50.8mm)

Reduction in Area: 44.2 %

Specification Comments:
This material meets all requirements of
Shur-Lok Specification MPS 1105 Rev C ✓

1. Material certifies to ASTM A 108 - 07 (unless otherwise noted) for Standard Cold Finished Bars
2. This material has not been welded nor weld repaired
3. Mercury has not been used in the production of this material

ALLOY VERIFICATION

QAI 3001/1

BY  DATE 6-8-13MATERIAL APPROVED FOR
MPS 1105Q.A. STAMP  DATE 6-8-13RAW MATERIAL
LOT NO:

29456

ITEM NO:

71451

INSPECTOR:



DATE:

6-8-13

ENHANCED VERIFIED COMPLIANT TO

SEARS 252.225-7008 ALTI

BY *Andrew Schless*

Andrew Schless

DIVISION METALLURGIST

NBMG-10 January 1, 2012

Sold to: Shur-Lok PO: PAM0743-00 Part: 71451 KANBAN Order No.: 375519

TR clerk signature: *Frederick Emery*

MIL0260

NUCOR**NUCOR CORPORATION
NUCOR COLD FINISH UTAH****Mill Certification**
1/25/20131875 West Highway 13 South
BRIGHAM CITY, UT 84302
(435) 734-9334
Fax: (435) 734-4581Sold To: BRALCO METALS #43
15090 NORTHAM ST
LA MIRADA, CA 90638-0000
(714) 736-4800
Fax: (714) 736-4840Ship To: BRALCO METALS #43
15090 NORTHAM ST
LA MIRADA, CA 90638-0000
(714) 736-4800
Fax: (714) 736-4840

Customer P.O.	43-107393	Sales Order	516833.1
Product Group	Cold Finish Bar	Part Number	332534
Grade	12L14 ASTM A108-07 (.09 max C)	Lot #	B1108623
Size	Round 0.6875 (.0020)	Heat #	AR293449 ✓
Product	RD 0.6875" 12L14HD 12-R CD.GR ✓	B.L. Number	B1-406376
Description	CF Grade 12L14HD (Heavy Draft) ✓	Load Number	B1-105975
Customer Spec		Customer Part #	332534

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Part Detail: RD 0.6875" 12L14HD 12-R Cold Drawn Ground
Process: Cold Drawn, Ground

C	Mn	P	S	Si	Cu	Cr	Ni	Mo	Sn	V	Cb
0.08%	1.01%	0.050%	0.310%	0.00%	0.20%	0.10%	0.07%	0.017%	0.000%	0.0000%	0.000%
Al	Pb										
0.000%	0.300%										

Country of Melting: USA ✓

Reduction Ratio 94 :1

Country of Rolling: USA

Yield Strength: 94000 PSI ✓


Tensile Strength: 95000 PSI ✓


Elongation: 12.0 % in 2" (% in 50.8mm)


Reduction in Area: 47.0 %

Specification Comments:
This material meets all requirements of
Shur-Lok Specification MPS 1105 Rev C ✓

1. Material certifies to ASTM A 108 - 07 (unless otherwise noted) for Standard Cold Finished Bars
2. This material has not been welded nor weld repaired
3. Mercury has not been used in the production of this material

ALLOY VERIFICATION	
QAI 3001/1	
BY 	DATE 6-8-13

MATERIAL APPROVED FOR	
MPS 1105	
Q.A. STAMP 	DATE 6-8-13

RAW MATERIAL	29457
LOT NO:	71451
ITEM NO:	
INSPECTOR:	DATE: 6-8-13

**MATERIAL VERIFIED COMPLIANT TO
DFARS 252.225-7008 ALTI**BY *Todd Edwards*

Todd Edwards

DIVISION METALLURGIST

NBMG-10 January 1, 2012

Sold to: Shur-Lok PO: PAM0743-00 Part: 71451 KANBAN Order No.: 375519

TR clerk signature: *Fredrick Gunning*

MIL0260

Reid Metal Finishing
3110 West Harvard
Santa Ana, CA 92704
Phone: (714) 549-3771
Fax: (714) 549-3008

CERTIFICATION

P/L # 76132

06/22/2013

SOLD TO:

SHUR LOK CORP
2541 WHITE ROAD
IRVINE, CA 92614

SHIP TO:

SHUR LOK CORP
2541 WHITE ROAD
IRVINE CA 92614

Ship: RMF Truck 2

Net 75 Days

60,000 *qty.* SL2052C3
Per: ea.
0 B/O 41.00 /bs.

CAP

MIJ2413 78903 AGREEMENT

WE HEREBY CERTIFY COMPLIANCE TO THE BELOW REFERENCED PROCESS SPECIFICATION(S)

Chemical Film Type I Class 1A Gold (Hexavalent)

Color: GOLD

MIL-DTL-5541 (MIL-C-5541)

Rev: F (E)

IAW MPS0023

Quantity Inspected 500



6/22/13

Q.C. MANAGER:



Nadcap

Processes are performed by RMF in accordance with the latest revisions or superseding specifications. This certification also meets the requirements for designs and drawings developed under older revisions and/or non-current specifications. An Electrode Technologies, Inc., Company.

MIL0260

CERTIFICATE OF TEST

THIN METAL SALES, INC.

15047 Sierra Bonita Ln., Chino CA 91710

TEL: (909) 393-2273 FAX: (909) 393-2811

Web: www.ThinMetalSales.com / Email: Sales@ThinMetalSales.com

TMS LOT NUMBER
110771

CUSTOMER:	SHUR - LOK CORPORATION		
MATERIAL:	ALUMINUM	CUSTOMER P.O.#:	PAM0729-00 ✓
TYPE:	6061 ✓	DATE SHIPPED:	05/29/13
SIZE:	012 X 2.162" ✓	TMS SALES ORDER #:	88966 ✓
# OF UNITS:	5 COILS	MILL SOURCE:	ERICKSON METALS (USA)
NET WEIGHT:	370#	LOT NUMBER:	125107 ✓
SPECIFICATION:	ASTM-B-209 AMS-4025		

PHYSICAL PROPERTIES

TEMPER:	0
HARDNESS:	
ULTIMATE TENSILE	20,136 ✓
YIELD STRENGTH @ .2% OFFSET	8,219 ✓
PERCENT ELONGATION IN 2 INCHES	18.00% ✓
ASTM GRAIN SIZE	

CHEMICAL PROPERTIES

C	Mn	Si	Others-Each	Ni	Mo	Cu ✓	N	Al	Ti
	.04 ✓	.68 ✓				.32		REM. ✓	.03 ✓
Co	Fe ✓	Sn	Others- Total	Cr ✓	V	Mg ✓	Zr	Sb	Zn ✓
	.70			.22		1.00			.02

* Tensile & Yield Strength reported in PSI

* Mercury Free Statement: This material was not knowingly exposed to mercury /mercury products while being processed at TMS.

We certify this to be a true and just copy of the chemical and mechanical properties as recorded in our company files.

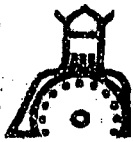
DATE: May 29, 2013

Richard Rennwald
 RICHARD RENNWALD
 QUALITY CLERK

RAW MATERIAL	
LOT NO:	125107
ITEM NO:	72275
INSPECTOR:	5-30-1
DATE:	

(72275)

MIL0260


**ERICKSON
METALS CORPORATION**

25 KNOTTER DRIVE / CHESHIRE, CT 06410-9998
PHONE 203-272-2818 / 800-243-2674 / FAX 203-272-2912
www.ericksonmetals.com

CERTIFICATE

44380

Date: 04/26/13

Page: 1

Account No: 0T2160

BILL TO:

THIN METAL SALES INC
15047 SIERRA BONITA LANE
CHINO, CA 91710

SHIP TO:

THIN METAL SALES INC
15047 SIERRA BONITA LANE
CHINO, CA 91710

Order No: 42893

PO#: 110771

Invoice No: 049024
Bill Of Lading#: 41141

CUST PART #:

Specs: *ASTM B209 AMS 4025 QQA 250/11

EMC PART NO: 6061-000-01200

Skid No.	No. of Cuts	Our Coil Number	Item Number	Alloy Temper	Gauge Width/Length
131922	2	125107	6061-000-01200	6061 ✓	0.01200 ✓
131923	2			0 ✓	12.0000 ✓

Specific Properties

Elements	Percentage
Silicon	0.6800
Silicon/Iron	0.0000
Iron	0.7000
Copper	0.3200
Manganese	0.0400
Magnesium	1.0000
Chromium	0.2200
Nickel	0.0000
Zinc	0.0200
Titanium	0.0300
Other Each	0.0000
Other Total	0.0000
Aluminum	Remainder
Gallium	0.0000
Vanadium	0.0000

Mechanical Analysis
Ultimate Tensile: 20136 psi ✓
Yield Strength: 8219 psi ✓
Elongation Pct: 18 % ✓

DATE:	INSPECTOR:
	ITEM NO:
	LOT NO:
	RAW MATERIAL

RAW MATERIAL	125107
LOT NO:	72275
ITEM NO:	5-30-13
INSPECTOR:	DATE:

110771

We hereby certify that the material referred to above conforms to the physical and chemical properties above and is in accordance with the requirements per stated specifications.

Robert D. Brown
Laboratory Services
An ISO 9001:2008 Registered Company

Date

MIL0260

CERTIFICATION

Reid Metal Finishing
3110 West Harvard
Santa Ana, CA 92704
Phone: (714) 549-3771
Fax: (714) 549-3008

P/L # 76398

06/26/2013

SOLD TO:

SHUR LOK CORP
2541 WHITE ROAD
IRVINE, CA 92614

SHIP TO:

SHUR LOK CORP
2541 WHITE ROAD
IRVINE CA 92614

Ship: RMF Truck 2

Net 75 Days

UNITS SHIPPED	PART #	DESCRIPTION	ARO #	RMF #	REF
19,130 <i>qty.</i>	SL606H08S	HOUSING	MIJ6480	79033	AGREEMENT
Per: ea. 0 B/O	260.00 lbs.				

WE HEREBY CERTIFY COMPLIANCE TO THE BELOW REFERENCED PROCESS SPECIFICATION(S)

Cadmium Plate Type II Class 2 Chromate

Color: GOLD

AMS-QQ-P-416

Rev: C

IAW MPS0016

Quantity Inspected 20

MPS0016 Sampling IAW MIL-STD-105 AQL 4.0 Level S-3 for visual and nondestructive (thickness) tests.

Q.C. MANAGER:

Julio Quijor**Nadcap**

Processes are performed by RMF in accordance with the latest revisions or superseding specifications. This certification also meets the requirements for designs and drawings developed under older revisions and/or non-current specifications. An Electrode Technologies, Inc., Company.

Hi Tech Heat Treating

331 W. 168th Street
Gardena, CA 90248-2732
P - 310-532-3705 F - 310-532-3750

CERTIFICATION **MIL0260**

Date	P.O. No.	Invoice #
5/29/2013	PA67026-00	81967

Customer:



Shur-Lok Corporation
2541 White Road
Irvine, CA 92614
maranda@shur-lok.com

Qty	U/M	Description	Treatment
50,000 4 130	pcs tubs lbs	Item - 10818HT Job Nbr - MIJ3720 Ref 0050 SL2052N08-3 NUT MTL: C-1050 Spec: AMS 5085	Austemper per MIL-H-6875 Rev H as Applicable & MPS 1124 Rev C 36 - 40 HRC Dip Parts in Rust Prevent Oil

TEST DESCRIPTION.	SPECIFIED HARDNESS	QTY TESTED	TEST RESULTS
Sample	36-40 HRC	12 pcs	69-70 RA = 38-40 HRC

OPERATION	SPEC TEMP	SPEC TIME	FURNACE #	ATMOSPHERE	Q-MEDIA
Austemper	1550°F	12 Min	SH3	Endo	Salt
Temper	700°F	2 HRS	D2	Air	A/C

COMMENTS: _____

		6/17/2013 ANGELA BATES -QUALITY ASSISTANT
PARTS WERE PROCESSED IN A MERCURY FREE ENVIROMENT		
Hi Tech Heat Treating, Inc. certifies that the material above has been processed in accordance with the listed specifications, and that all information provided is true and accurate. The hardness indicated represents the parts in their present state of completion.		

Hi Tech Heat Treating

331 W. 168th Street
Gardena, CA 90248-2732
P - 310-532-3705 F - 310-532-3750

CERTIFICATION ^{MIL0260}

Date	P.O. No.	Invoice #
5/29/2013	PA67026-00	81967

Customer:

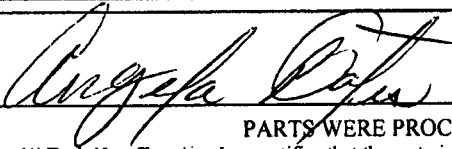

Shur-Lok Corporation
2541 White Road
Irvine, CA 92614
maranda@shur-lok.com

Qty	U/M	Description	Treatment
50,000 4 130	pcs tubs lbs	Item - 10818HT Job Nbr - MIJ3720 Ref 0050 SL2052N08-3 NUT MTL: C-1050 Spec: AMS 5085	Austemper per MIL-H-6875 Rev H as Applicable & MPS 1124 Rev C 36 - 40 HRC Dip Parts in Rust Prevent Oil

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Sample	36-40 HRC	12 pcs	69-70 RA = 38-40 HRC

OPERATION	SPEC TEMP	SPEC TIME	FURNACE #	ATMOSPHERE	Q-MEDIA
Austemper	1550°F	12 Min	SH3	Endo	Salt
Temper	700°F	2 HRS	D2	Air	A/C

COMMENTS:

		6/17/2013 ANGELA BATES -QUALITY ASSISTANT
PARTS WERE PROCESSED IN A MERCURY FREE ENVIROMENT		
Hi Tech Heat Treating, Inc. certifies that the material above has been processed in accordance with the listed specifications, and that all information provided is true and accurate. The hardness indicated represents the parts in their present state of completion.		

MIL0260

Reid Metal Finishing
3110 West Harvard
Santa Ana, CA 92704
Phone: (714) 549-3771
Fax: (714) 549-3008

CERTIFICATION

P/L # 76309 ✓

06/25/2013

SOLD TO:

SHUR LOK CORP
2541 WHITE ROAD
IRVINE, CA 92614

SHIP TO:

SHUR LOK CORP
2541 WHITE ROAD
IRVINE CA 92614

Ship: RMF Truck 2

Net 75 Days

UNITS SHIPPED	PART #	DESCRIPTION	PO	RMF #	REF
50,000 qty.	SL2052N08-3 ✓	NUT	MIJ3720 ✓	78644	AGREEMENT
Per: lb. 0 B/O	116.00 lbs.				

WE HEREBY CERTIFY COMPLIANCE TO THE BELOW REFERENCED PROCESS SPECIFICATION(S)

Dull Cad Plate Type II Class 2 Chromate

Color: GOLD

AMS-QQ-P-416

Rev: C

IAW MPS0020

DESCALE

Quantity Inspected 80

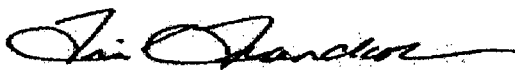
MPS0016 Sampling IAW MIL-STD-105 AQL 4.0 Level S-3 for visual and nondestructive (thickness) tests.

25

6-25-13

50

Q.C. MANAGER:



Processes are performed by RMF in accordance with the latest revisions or superseding specifications. This certification also meets the requirements for designs and drawings developed under older revisions and/or non-current specifications. An Electrode Technologies, Inc., Company.



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO25150

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
14	600	EA	NAS1149D0663J		X5364	ANILLO INDUSTRIES	10630		


Jason Lewis
Vice President of Quality

07/25/14

ANILLO Industries, Inc.

2090 NORTH GLASSSELL STREET, ORANGE, CA 92865-3391 USA

PLEASE REMIT TO

P.O. BOX 5586 ORANGE, CA 92863-5586 USA

(714)637-7000 (562)924-6632 FAX(714) 637-3022



547828

Packing List & Certification

WE ACCEPT
VISA/MASTER/DISCOVER/AMEX

SOLD TO B/E AEROSPACE, INC. ATTN: ACCOUNTS PAYABLE DEPT. P.O. BOX 025263 MIAMI, FL 33102-5263	1165	SHIP TO B/E AEROSPACE, INC. CONSUMABLES MANAGEMENT 9835 NW 14TH ST MIAMI, FL 33172	E
----------------------------------------------------------------------------------------------------------------------	-------------	-----------------------------------------------------------------------------------------------------------	----------

DATE ORDER REC'D 12/19/2011	ORDER NUMBER 1A1294	INVOICE DATE	SHIPPED VIA FEDXG 033101490	TERMS 1% 10 DAYS, NET 30
ITEM	ORDERED	SHIPPED	DESCRIPTION	NET WEIGHT

1 337,940 **75.000** **NAS1149D0663J**
REV 5 /LOT#X5384 /MIN/MAX /QCR:1,4,6,8,15,16 /AN960JD616
ECCN: 9A991 Schedule B#: 7616.10.8000 COO: US NLR

We certify that: 1. item number 1 above is manufactured in accordance with the material and processing specifications of this order.
2. We certify that the material on this order conforms in all respects to the current applicable government and/or manufacturer's specification. Test reports are on file and are available for examination on all Anillo manufactured parts. All claims for errors or shortages must be made within 10 days after receipt of goods.
No good to be returned without written authorization. All claims for defective material must filed within 30 days of shipment to receive consideration. We do not assume financial responsibility or liability from the use of products sold, other than the replacement value of the products sold, if claimed within the specified time limit above.

<< R.M.A.# REQUIRED FOR RETURNS >>

Certification

B/E Aerospace, Inc. - Consumables Management

Self Release

Signature and Stamp:

Date: 07-17-13



BY Ben Omidwar
Ben Omidwar, Quality Assurance Manager

FI 4.03.05

CERTIFIED INSPECTION REPORT

Alcoa Inc.

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

Per

Rob Woodall

Rob Woodall
Director of Manufacturing Davenport Works

Terrence Thom

Terrence Thom
Quality Assurance Manager

1400519 0
Ship Date B.L. No. Invoice No. Alcoa No. Item
2012-07-05 7161511 00000 1000355792-1 DP-55792-1
P.O. No./Govt Contract No. Customer Alcoa Item
TV8100 Lp#: 01 BOEING-TMX G041003529R07

TX5012

Page 1 of 2

833839

Ship To: THE BORING COMPANY
TMX AEROSPACE DIVISION
12821 CARMENITA ROAD
UNIT F
SANTA FE SPRINGS 90670 CA

Item Description

0.063 IN TK (+.0030 -.0030) X 48.0 IN W (+.046875 -.046875) CAT X 895699-7 (N) A/T ALCLAD 2024-T3 COILED SHEET MILL FINISH ~~895699-7~~ AMS-QQ-A-250/5 REV A IS 2010 AS9103 D6-82479 REV F ((MARKED)) LIGHTLY OILED COIL SIZES: ID 20 IN OD MAX 48 IN MAX GROSS SKID WGT: 7500 LB QUAN TOL +/- 30 % CQR 0108580 REV 12 CUST REQ 12-01-12 *** W/E 12-07-21 ***

HM 9-27-12

Num	Package Ticket	Lot	Weight	Quantity	COM	Inspector Clock Numbers
1	426473	499411	5671	1	PC	27619 47135

Notes for CQR: 0108580.12

PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF AMS-QQ-A-250/5 ALSO MEETS THE REQUIREMENTS OF QQ-A-250/5F, AMENDM ENT 2.
PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF QQ-A-250/5F, AMENDMENT 2 ALSO MEETS THE REQUIREMENTS OF AM S-QQ-A-250/5.

CQR: 0108580.12 -Specification Limits

Impr	Dir	UTS	TYS	ELAD
		KSI	KSI	PCT
T3	Long Transv.	Max		
		Min	61.0	40.0 15

Chemical Composition	SI	FE	CU	MN	MG	CR	ZN	TI	Each	Total	Aluminum
Alloy 2024	Max	0.50	0.50	4.9	0.9	1.8	0.10	0.25	0.15	0.05	0.15
	Min			3.8	0.30	1.2					REMAIN

Chemical Composition	CU	MN	MG	V	ZN	TI	FE+SI	Each	Aluminum
LINER	Max	0.10	0.05	0.05	0.05	0.10	0.03	0.70	0.03
Alloy 1230	Min								99.30

AN960JD616

07-17-13
NA\$114900663J
X5364

Signature:
Title:

Quality Assurance Manager

CERTIFIED INSPECTION REPORT

Alcoa Inc. **DAVENPORT WORKS** 4879 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA,

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

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Per:

Rob Woodall

Rob Woodall
Director of Manufacturing Davenport Works

Terrance Thom

Terrance Thom
Quality Assurance Manager

1400519	0			
Ship Date	B.L. No.	Invoice No.	Alcoa No.	Item
2012-07-05	7161511	00000	1000355792-1	DP-55792-1
P.O. No./Govt Contract No.	Customer	Alcoa Item		
TV8100 Ln#: 01	BOEING-TMX	G041003529R07		

Page 2 of 2

CQR: 0108580.12 -Specification Limits (cont.)
Lot: 499411 - Mechanical, Physical, Metallography, Quantometer Results

Temp	Dir	Test	NO ->	UTS	TYS	EL4D
T3	Long Transv.	2		63	44	17.5
				63.6	43.6	17.8

Cast Number	Chemical - OES	SI	FE	CU	MN	MG	CR	ZN	TI
H9603056	Actuals	0.05	0.14	4.6	0.65	1.5	0.00	0.09	0.03

This material was melted in the United States or a Qualifying Country [REF DFARS 225.872.1(a)]; it was manufactured in the United States

AN960JD616

Alcoa Inc.

07-17-13

NA61149D0663J

XS364

Signature:

Title:

[Signature]

Certification

ANILLO INDUSTRIES, INC.
2090 North Glassell st.
Orange, CA. 92865-3391
(714) 637-9110

This is to certify that the below listed parts were processed per the applicable specification listed below.

Test reports and procedures governing this process are on file and subject to examination.

CHEMICAL FILM MIL-DTL-5541

Type	Class	Thickness	Revision
I	3		F

Job Number: **X5364**

P/N REV.: **5**

Quantity: **100,000**

Visual: **Y**

Part Number: **NAS1149 D 0663 J**

Adhesion: **N**

Description: **AN960JD616**

Date: **07/12/13**

Authorized by: **MARIBEL CUEVAS**

Stamp:



FORM # 4.09.117 REV A 05/19/09



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO25150

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	CURE DATE	EXP DATE
16	125	EA	NAS1473R3		G2674	BRISTOL INDUSTRIES	27238	07/01/14	09/30/29


Jason Lewis
Vice President of Quality

07/25/14

Certificate of Conformance

 PACKING SLIP
 SHIPPER H9700


630 E. LAMBERT ROAD / BREA, CA 92821 / (714) 990-4121

Date Shipped	Shipm't No	No. Cartons	Weight
		2	66.7
Shipped Via FED EX 01N			

Sold
To

B E AEROSPACE INC.
CONSUMABLES MGMT.
PO BOX 025263
MIAMI, FL 33102-5263

Ship
To

BE AEROSPACE
9835 N.W. 14TH
MIAMI, FL 33172

Cust. No.	Our Order	Date Ordered	Customer P.O. No.	Salesman No.	Freight Charges	F.O.B. Point
49505	067236	07-08-13	0PZV01	48		* SHIP POINT *

Line	Quantity Order	Item Number	Description	Quantity Previously Shipped (Due Date)	Quantity Shipped
02	25,000	872022	NAS1473R3 BSN1473C3R (BSN1473C3R NAS1473R3 (& R3K)) ECCN : 9A991d Schedule B # 7318-16-0000 PO ITEM 002 REV 10 CHEMICAL & PHYSICAL CERTS AND C OF C REQUIRED *** * *** SHIPPING...SHIP NEXT DAY AIR PER CUSTOMERS REQUEST *** * *** LOT G2674 6,476	94	6,476

Special Instructions:



We Hereby certify the referenced order(s) conform to the requirements of the applicable drawings, standards and specifications. Evidence of compliance is retained on file.

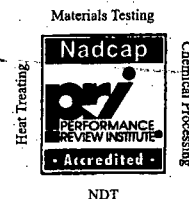
Rick Kuhns
Rick Kuhns.
Q.A. Director
 MANUFACTURED IN U.S.A.

LAST ORDER LINE.



CERTIFICATE OF CONFORMITY CHEMICAL & PHYSICAL TEST DATA

630 East Lambert Road
P.O. Box 630/Brea, California 92822-0630
Tel: (714) 990-4121 Fax: (714) 529-6726



LOT #: G2674

Assembly Mechanical Testing

Customer Drawing	NAS1473R3 NAS1473R3K	Revision	10
Bristol Part No.	BSN1473C3R	Manufacture Date	07/11/14
Performance	NASM25027	Lot Quantity	6,476

Push-Out / Torque-Out

Requirements	Sample Size - 10	Push-Out = 100	Torque-Out = 60
Samples	1	2	3
Push-Out	100	100	100
Torque-Out	60	60	60

Component Requirements	Material	Bristol Q.C. Number	NDT	Magnetic Permeability	Finish	Thread Spec.
Nut Lot # F0621	A286 per AMS 5525	CP 28889 Lab Tested	FPI per ASTM-E-1417 Sample	<2.0	Passivate per AMS 2700 Type II	Lube per AS5272 Type I
Conformance	AMS 5525	Material Traceability	Conforms NADCAP	Conforms NADCAP	Conforms NADCAP	Conforms
Source	Material / Mill Certs	Bristol	Bristol	Bristol	Bristol	Bristol

Tensile

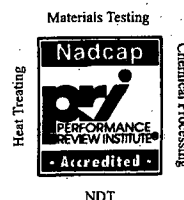
Required Min	2460 LBS
Sample No.	LBS
2	2509
5	2509
8	2509
10	2509

Component Requirements	Material	Bristol Q.C. Number	NDT	Finish	Magnetic Permeability
Dome (Shell) Lot # F0620	A286 per AMS 5525	CP 28890 Lab Tested	FPI per ASTM-E-1417 Sample	Passivate per AMS 2700 Type II	<2.0
Conformance	AMS 5525	Material Traceability	Conforms NADCAP	Conforms NADCAP	Conforms
Source	Material / Mill Certs	Bristol	Bristol	Bristol	Bristol



**CERTIFICATE OF CONFORMITY
CHEMICAL & PHYSICAL
TEST DATA**

630 East Lambert Road
P.O. Box 630/Brea, California 92822-0630
Tel: (714) 990-4121 Fax: (714) 529-6726



LOT #: G2674

Component Requirements	Material	Bristol Q.C. Number	Heat Treat	NDT	Finish	Rubber Mold (See Assembly Lot Number)
Washer (Seal) Lot # F1880-01	A286 per AMS 5853	ES 28812 Lab Tested	After Heat Treat conforms to ASM 5732	FPI per ASTM-E-1417 Sample	Passivate per AMS 2700 Type II	per MIL-PRF-6855
Conformance	AMS 5732	Material Traceability	Conforms NADCAP	Conforms NADCAP	Conforms NADCAP	Conforms
Source	Material / Mill Certs	Bristol	Bristol	Bristol	Bristol	Outside Process PO # 614591

Comments:

Parts have been produced, sampled, inspected, and tested in accordance with customer purchase order and/or referenced specifications and conform to all requirements unless otherwise specified.

Unless otherwise specified, specifications are to the latest revision. Test methods are in accordance with the latest revisions of NASM-1312 Fastener Test Methods if not specified by the customer. Any deviations to specification or customer purchase order requirements relative to testing have been resolved in writing with customers prior to shipment.

This certification relates only to the item(s) tested and shall not be reproduced except in full. The recording of false, fictitious or fraudulent statements or entries on this certificate may be punishable as a felony under federal law.

Review and Signature by one (1) of the following Authorizes this certification



Angie Figueroa

Angie Figueroa, Certification Administrator

Rick Kuhns, Quality Assurance Manager

Anh Nguyen, Certification Clerk



CERTIFICATE OF CONFORMITY
CHEMICAL & PHYSICAL
TEST DATA

630 East Lambert Road
P.O. Box 630/Brea, California 92822-0630
Tel: (714) 990-4121 Fax: (714) 529-6726

Page 1 of 1

Materials Testing



NDT

TORQUE EFFECTIVITY TEST

NUT PART #: BSN1473C3MXN

BOLT USED: NAS9603

LOT #: F0621

MAX INSTLN. & REMOVAL: 18.0 IN-LBS

MIN BREAKAWAY: 2.0 IN-LBS

SEATING TORQUE: N/A IN-LBS

1st CYCLE: N/A

SAMPLE NO.	CYCLE														
	1			7			15								
	I	B	R	I	B	R	I	B	R	I	B	R	I	B	R
1	7.5	6.0	6.0	8.0	8.0	8.0	10.0	10.0	10.0						
2	10.0	9.0	9.0	12.0	10.0	10.0	13.0	13.0	10.0						
3	7.0	7.0	6.0	9.0	9.0	8.0	10.0	10.0	9.0						
4	9.0	8.0	7.0	8.0	8.0	7.0	11.0	11.0	10.0						
5	7.0	7.0	6.0	10.0	10.0	12.0	13.0	12.0	13.0						
6	7.0	7.0	6.5	9.0	9.0	9.0	12.0	10.0	12.0						
7	9.0	8.0	8.0	10.0	11.0	11.0	13.0	13.0	13.0						
8	7.0	7.0	6.0	8.0	9.0	9.0	12.0	12.0	11.0						
9	7.0	7.0	7.0	8.0	8.0	9.0	11.0	11.0	10.0						
10	7.5	6.0	7.0	9.0	8.0	8.0	10.0	10.0	11.0						
11															
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REMARKS:



PMR

PRECISION MFG. & RUBBER CO., INC.

Date 7/9/2014

Conformance Certificate for Material Shipped

The PMR - Precision Mfg. & Rubber Co. hereby certifies that all materials used in the manufacture of parts called for on purchase order no. 614591-78721

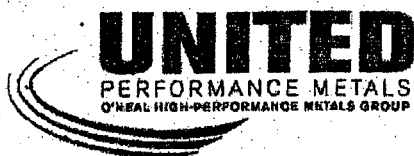
received from Bristol Industries conform to the material specifications indicated in drawings or specifications as called for on the said purchase order. Test reports are on file with us or with our suppliers for examination and indicate conformance with applicable specification requirements.

The PMR - Precision Mfg. & Rubber Co. also certifies that the parts listed below shipper no. 273483 are manufactured in accordance with the material specifications called for on said purchase order that are current on the date on which the order was accepted.

<u>PART NO</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>CURE DATE</u>	<u>SHELF LIFE</u>
BSN1473-C3R	Work Order No: G2574-00 Rubber MIL-PRF-6855-CL1-G60-DUR 60-BLACK Cert No: 1027424 Type: Dome # of Parts: 2	6,406	3Q 2014 (7/14)	3Q 2029

SCANNED

By: George Surh
George Surh



3475 Symmes Road
Hamilton, OH 45015
800-347-2376

CERTIFICATE OF QUALITY COMPLIANCE

Date: 02/03/14

To: Bristol Industries
630 E. Lambert Road

Brea, CA 92821

Attention: Quality

This is to confirm that the items identified herein have been controlled per the requirements of your purchase order number 589096 and associated specifications.

Part Number: 982095 UPM Sales Order: 02005263
Description: A286 ANN .033-.035 #3 AMS5525 1.00XCOIL
Manufacturer: ALLEGHENY STE
Heat Number: 519225-01

WE CERTIFY THAT THE MATERIAL SUPPLIED CONFORMS IN EVERY RESPECT WITH THE PHYSICAL AND CHEMICAL DEMANDS INDICATED IN THE PURCHASE ORDER IDENTIFIED ABOVE AND HAS BEEN SUBJECT TO THE QUALITY SYSTEM REQUIREMENTS IN ACCORDANCE WITH THE CONDITIONS OF OUR AS9100 APPROVAL.

LAB APPROVED

DATE: 3/18/14 TECH: [Signature]

Q.C. # CP28889

DFAR 252.225-7009

(252.225-7014 ALT 1)

[Signature]
Fernando Gonzalez

SCANNED

NOTICE OF SHIPMENT/
PACKING LIST



CERTIFICATE OF TEST

AL 8166-4 1211

CUST. ORD. NO. & DATE		CUST. CODE		ACCEPTING MILL	SHIPPER NO.	PRODUCT CODE	MILL ORDER NUMBER	DATE SHIPPED
01020498		03/12/12 110977		BRACKENRIDGE, PA	543504	13020103060000	32-032-079	06/21/12
FORMS DISTRIBUTION		REPEAT ORDER		DD RATE	PRI ORTY	MATL.	SHIPPING LOCATION	INVOICE
SOLD TO → 1 SHIP TO → SPEC		96566-0		26		2141 BRACKENRIDGE	PA	034058
SOLD TO				PRIME SEC.		SHIP TO		
UNITED PERFORMANCE METALS				DSO		UNITED PERFORMANCE METALS		
3475 SYMMES ROAD				516		3475 SYMMES ROAD		
HAMILTON OH 45015						HAMILTON OH 45015		

GRADE AND SPECIFICATIONS CARRIER - COORDINATORS, INC.
 "ATI A286" PRECIPITATION HARDENABLE STAINLESS STEEL SHEET C R COILS ANNEALED 2D FIN 3 EDGE (AMS 5525J)
 (S-1000 DATED 8/1/2011) (S-400 DTD 10/10/2011) (RR9000:SABRE) (UPM-QRS-001) (AMS 5858D) (PWA 300 REV BK)
 (DUAL CERTS LCS/NON-LCS) (CONTROLLED TO PWA LCS REQUIRMENTS) (F-14, F-17, F-22, F-23, F-MASTER)

ITEM	PCS	DIMENSIONS W/G/L	HEAT #	COIL #	TEST #	GROSS	TARE	NET	THEO	TAG #/	CD	SKID #
001A	1	38./0.0351/1920.	519225	-01 05042N321	3731294	8712	50	8662		108671		
C CUST IDENTITY 01257												
1 SKID												
						8712	50	8662				

HEAT	519225-01	TEST LOCATION	TC	TC	TC	TC	TC	TC	TC	TC	TC	TC
HEAT	519225-01	TEST LOCATION	TC	TC	TC	TC	TC	TC	TC	TC	TC	TC
HEAT	519225-01	TEST LOCATION	TC	TC	TC	TC	TC	TC	TC	TC	TC	TC

ITEM	TEST NO	TEST CONDITION	YIELD PSI	TENSILE PSI	% ELONG IN 2"	HARDNESS	BEND	GRAIN SIZE	STRESS CORROSION
001A	3731294	AS RECEIVED	T*49500	97000	42	69.HR30TW	T PASS		NR
TEST LOCATION		TC	TC	TC	TC	TC	TC		

REVIEWED BY Q.C.
 Date 6-27-12 by PR

LAB APPROVED
 DATE: 5/10/14
 Q.C. # CP28889
 DFR 252.225-7009
 (252.225-7014 ALT 1)

PAGE 01 - CONTINUED ON PAGE 02

CONSIGNEE - Please Note - This consignment was turned over to carrier in first class condition, being correctly loaded, at which time our responsibility for loss or damage in shipment ceased. For your protection please examine shipment as it arrives. If any shortage or damage is discovered, have a full description made by transportation agent on receipt before signing.

Material Safety Data Sheets for this product have been supplied to your Purchasing Department. For an additional copy phone 724-226-5880. CAUTION: Processing that makes fumes, dust, or solutions may cause lung disease. See Material Safety Data Sheets for further information.

WARNING Les fiches d'information-sécurité de ce produit ont été fournies à votre département chargé des achats. Pour obtenir des exemplaires supplémentaires veuillez téléphoner au numéro suivant 724-226-5880. Attention: les traitements entraînant la production de vapeurs, poussières, ou solutions peuvent être cause de maladies pulmonaires. Pour plus de renseignements se référer aux fiches d'information-sécurité.

The above is a true copy of data on file. The material and test results conform to the sales contract and specification(s) as set forth in Allegheny Ludlum's Order Acknowledgement.
 Stephen Wolf - Director, Corporate Quality Assurance

Fernando Gonzalez

UNITED PERFORMANCE METALS
 This is to certify that in accordance with the records in our files the material shipped on your purchase order conforms to the following.

Size: 100 X COIL
 P.O.: 889088
 Part#: 982095
 Sales #: 02006283
 Quantity: 4

Description: A286 ANN .043-.045 #3 AMS5525
 Customer: Bristol Industries
 Shipped: 02/03/2014
 Heat: 519225-01

NOTICE OF SHIPMENT/
PACKING LIST



CERTIFICATE OF TEST

AL 6168-4 1211

CUST. ORD. NO. & DATE 01020498		CUST. CODE 03/12/12 110977		ACCEPTING MILL BRACKENRIDGE, PA		SHIPPER NO 543504		PRODUCT CODE 13020103060000		MILL ORDER NUMBER 32-032-079		DATE SHIPPED 06/21/12	
FORMS DISTRIBUTION SOLD TO 1 SHIP TO SPEC		REPEAT ORDER 96566-0		DO RATE 26		GOVT CONTRACT		MATERIAL 2141		SHIPPING LOCATION BRACKENRIDGE		INVOICE PA 034058	
SOLD TO UNITED PERFORMANCE METALS 3475 SYMMES ROAD HAMILTON OH 45015				PRIME SEC. DSO DSO 516				SHIP TO UNITED PERFORMANCE METALS 3475 SYMMES ROAD HAMILTON OH 45015					

GRADE AND SPECIFICATIONS
"ATI A286" PRECIPITATION HARDENABLE STAINLESS STEEL SHEET C R COILS ANNEALED 2D FIN 3 EDGE (AMS 5525J)
(S-1000 DATED 8/1/2011) (S-400 DTD 10/10/2011) (RR9000:SABRE) (UPM-QRS-001) (AMS 5858D) (PWA 300 REV BK)
(DUAL CERTS LCS/NON-LCS) (CONTROLLED TO PWA LCS REQUIRMENTS) (F-14, F-17, F-22, F-23, F-MASTER)

ITEM TEST NO	TEST	YIELD	TENSILE	% ELONG	HARDNESS	BEND	GRAIN STRESS	CORROSION
001A 3731294	CONDITION	PSI	PSI	IN 2"			SIZE	SALT SPRAY
	HT1 AT	*116000.	161000	24.	55.HR30N			
	ROOM TEMP				54.HR30N			
TEST LOCATION	TC	TC	TC	TC				
	* Y.S. BY 0.2% OFFSET METHOD							
	AVERAGE	(1) STRESS P&W E-25						
ITEM TEST NO	GRAIN SIZE	MACROETCH	RUPTURE	TRAN BEND				
001A 3731294	10.	PASS	23.3 HRS	2.				
		PASS	DISCONTINU					
TEST LOCATION	TC	TC	TC	TC				
METALLOGRAPHIC MAGNIFICATION: 100X ETCHANT USED: OXALIC ACID								

GRADE VERIFICATION WAS CARRIED OUT SPECTROSCOPICALLY

DIN EN 10204:2005 - 3.1 CERTIFICATE DOES NOT INDICATE PED APPROVAL FOR THIS MATERIAL.

ATI ALLEGHENY LUDLUM DOES NOT USE MERCURY IN THE TESTING OR PRODUCTION OF ITS PRODUCTS.

SAMPLES TESTED PER AMS 5525 WERE TREATED AT 1325 DEG. F (718 C) FOR 16 HOURS AND AIR COOLED TO ROOM TEMPERATURE PRIOR TO TESTING.

WESTMORELAND MECHANICAL TESTING & RESEARCH, YOUNGSTOWN, PA (T7869) IS A GEAE S400 AND ISO/IEC 17025 APPROVED FACILITY.

PAGE 02 - CONTINUED ON PAGE 03

CONSIGNEE-Please Note-This consignment was turned over to carrier in first class condition, being correctly loaded, at which time our responsibility for loss or damage in shipment ceased. For your protection please examine shipment as it arrives. If any shortage or damage is discovered, have a full description made by transportation agent on waybill before signing.

Material Safety Data Sheets for this product have been supplied to your Purchasing Department. For an additional copy phone 724-226-5980. CAUTION: Processing that makes fumes, dust, or solutions may cause lung disease. See Material Safety Data Sheets for further information.

WARNING

Les fiches d'information-sécurité de ce produit ont été fournies à votre département chargé des achats. Pour obtenir des exemplaires supplémentaires veuillez téléphoner au numéro suivant 724-226-5980. Attention: les traitements entraînant la production de vapeurs, poussières, ou solutions peuvent être cause de maladies pulmonaires. Pour plus de renseignements se référer aux fiches d'information-sécurité.

06/21/12 10:29:01

The above is a true copy of data on file. The material and test results conform to the sales contract and specification(s) as set forth in Allegheny Ludlum's Order Acknowledgement.

Stephen Wort - Director, Corporate Quality Assurance

LAB APPROVED
DATE: 7/14/12
Q.C. # CP28809
DFAR 25.225-7009
(25.225-7014 ALT 1)

UNITED PERFORMANCE METALS
This is to certify that in accordance with the records in our files the material shipped on your purchase order conforms to the following:

Fernando Gonzalez

Size: 1.00 X COIL
P.O.: 989096
Part#: 962096
Sales #: 02005283
Quantity: 4

Description: A286 ANN .035-.036 #3 AMS5525
Customer: Briel Industries
Shipped: 02/06/2014
Heat: S19225-01

NOTICE OF SHIPMENT/
PACKING LIST



CERTIFICATE OF TEST

AL 6188-4 1211

CUST. ORD. NO. & DATE 01020498		CUST. CODE 03/12/12 110977		ACCEPTING MILL BRACKENRIDGE, PA		SHIPPER NO 543504		PRODUCT CODE 13020103060000		MILL ORDER NUMBER 32-032-079		DATE SHIPPED 06/21/12	
FORMS DISTRIBUTION SOLD TO 1		REPEAT ORDER 96566-0		DO RATE 26		GOVT CONTRACT		MATERIAL 2141		SHIPPING LOCATION BRACKENRIDGE		INVOICE PA 034058	
SOLD TO UNITED PERFORMANCE METALS 3475 SYMMES ROAD HAMILTON OH 45015				PRIME SEC. DSO DSO 516				SHIP TO UNITED PERFORMANCE METALS 3475 SYMMES ROAD HAMILTON OH 45015					

GRADE AND SPECIFICATIONS

CARRIER - COORDINATORS, INC.

"ATI A286" PRECIPITATION HARDENABLE STAINLESS STEEL SHEET C R COILS ANNEALED 2D FIN 3 EDGE (AMS 5525J) (S-1000 DATED 8/1/2011) (S-400 DTD 10/10/2011) (RR9000:SABRE) (UPM-QRS-001) (AMS 5858D) (PWA 300 REV BK) (DUAL CERTS LCS/NON-LCS) (CONTROLLED TO PWA LCS REQUIREMENTS) (F-14, F-17, F-22, F-23, F-MASTER)

THIS DIN EN 10204:2005 - 3.1 CERTIFICATE OF TEST SHALL NOT BE REPRODUCED EXCEPT IN FULL. FEDERAL LAW PROHIBITS THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE AND MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL LAW. ATI AL HOLDS SEVERAL QUALITY CERTIFICATIONS THAT INCLUDE ISO-9001, AS9100, NADCAP, AND ISO/IEC 17025. MATERIAL WAS MANUFACTURED IN ACCORDANCE WITH THE ATI AL QUALITY MANUAL REVISION 20 DATED 02/24/2012.

ATI ALLEGHENY LUDLUM WORKS TO THE ROLLS ROYCE SABRE QUALITY MANAGEMENT SYSTEM.

ATI ALLEGHENY LUDLUM PERFORMS CHEMICAL ANALYSIS BY THE FOLLOWING TECHNIQUES:

C, S BY COMBUSTION/INFRARED
N, O, H BY INERT FUSION/THERMAL CONDUCTIVITY
MN, P, SI, CR, NI, MO, CU, CB, CO, V BY WDXRF
B BY OES
AL AND TI (>=0.10%) BY WDXRF, OTHERWISE BY OES
PB, BI, AG BY GFAA

MATERIAL TESTED AT ATI ALLEGHENY LUDLUM GEAE S400 APPROVED FACILITIES (T1225 & T9317):
NATRONA HEIGHTS, PA TECHNICAL CENTER; BRACKENRIDGE, PA AND NEW BEDFORD, MA.

ATI ALLEGHENY LUDLUM HOLDS SEVERAL QUALITY AND LABORATORY CERTIFICATIONS THAT INCLUDE ISO-9001, AS9100, AD 2000-MERKBLATT WO, EU PRESSURE EQUIPMENT DIRECTIVE 97/23/EC, NADCAP, ISO/IEC 17025, GEAE S400, GEAE S-1000. REFER TO WWW.ALLEGHENYLUDLUM.COM TO ACCESS THE CURRENT ATI AL QUALITY CERTIFICATIONS.

MATERIAL WAS SOLUTION ANNEALED AT 1800F +/- 25F (982C +/- 14C) FOR A TIME COMMENSURATE WITH SECTION THICKNESS AND COOLED AT A RATE EQUIVALENT TO AIR COOL OR FASTER.

PAGE 03 - CONTINUED ON PAGE 04

CONSIGNEE - Please Note - This consignment was turned over to carrier in first class condition, being correctly loaded, at which time our responsibility for loss or damage in shipment ceased. For your protection please examine shipment as it arrives. If any shortage or damage is discovered, have a full description made by transportation agent on waybill before signing.

Material Safety Data Sheets for this product have been supplied to your Purchasing Department. For an additional copy phone 724-225-5980. CAUTION: Processing that makes fumes, dust, or solutions may cause lung disease. See Material Safety Data Sheets for further information.

WARNING

Les fiches d'information-sécurité de ce produit ont été fournies à votre département chargé des achats. Pour obtenir des exemplaires supplémentaires veuillez téléphoner au numéro suivant 724-225-5980. Attention: Les traitements entraînant la production de vapeurs, poussières, ou solutions peuvent être cause de maladies pulmonaires. Pour plus de renseignements se référer aux fiches d'information-sécurité.

This above is a true copy of data on file. The material and test results conform to the sales contract and specification(s) as set forth in Allegheny Ludlum's Order Acknowledgement.

Stephen Watt
Director, Corporate Quality Assurance

LAB APPROVED
DATE: 5/18/14
Q.C. # CP28889
DFAR 252.225-7009
(252.225-7014 ALT 1)

UNITED PERFORMANCE METALS

This is to certify that in accordance with the records in our files the material shipped on your purchase order conforms to the following:

Size: 1.00 X COIL
P.O.: 592098
Part#: 882095
Sales #: 02005283
Quantity: 4

Description: A286 ANN. 035-035 #3 AMS5525
Customer: Bristol Industries
Shipped: 02/06/2014
Heat: 519225-01

Fernando Gonzalez

NOTICE OF SHIPMENT/
PACKING LIST



CERTIFICATE OF TEST

AL 6168-4 1211

CUST. ORD. NO. & DATE 01020498		CUST. CODE 03/12/12 110977	ACCEPTING MILL BRACKENRIDGE, PA	SHIPPER NO 543504	PRODUCT CODE 13020103060000	MILL ORDER NUMBER 32-032-079	DATE SHIPPED 06/21/12
FORMS DISTRIBUTION SOLD TO → 1 SHIP TO → SPEC →		REPEAT ORDER 96566-0	DO I PRI ORITY 26	GOVT CONTRACT	MATL 2141	SHIPPING LOCATION BRACKENRIDGE PA	INVOICE 034058
SOLD TO UNITED PERFORMANCE METALS 3475 SYMMES ROAD HAMILTON OH 45015		PRIME SEC. DSO DSO 516	SHIP TO UNITED PERFORMANCE METALS 3475 SYMMES ROAD HAMILTON OH 45015				

GRADE AND SPECIFICATIONS
"ATI A286" PRECIPITATION HARDENABLE STAINLESS STEEL SHEET C R COILS ANNEALED 2D FIN 3 EDGE (AMS 5525J) (S-1000 DATED 8/1/2011) (S-400 DTD 10/10/2011) (RR9000:SABRE) (UPM-QRS-001) (AMS 5858D) (PWA 300 REV BK) (DUAL CERTS LCS/NON-LCS) (CONTROLLED TO PWA LCS REQUIRMENTS) (F-14, F-17, F-22, F-23, F-MASTER)

STRESS RUPTURE - CONTINUOUS AXIAL STRESS OF 67500 PSI AT 1200F (465 MPA AT 649C) MATERIAL </.1874.

STRESS RUPTURE - CONTINUOUS AXIAL STRESS OF 70000 PSI AT 1200F (483 MPA AT 649C) MATERIAL >.1874.

TESTING WAS PERFORMED AT THE FOLLOWING LOCATIONS:
TC = ATI-ALLEGHENY LUDLUM; 1300 PACIFIC AVENUE; NATRONA HEIGHTS, PA 15065

FOR ACCESS TO ONLINE CERTIFICATES OF TEST
REGISTER AT WWW.ALCEXTRA.COM

LAB APPROVED
DATE: 06/22/12
Q.C. # CP20884
DFAR 252.225-7009
(252.225-7014 ALT 1)

ISSUED BY ATI ALLEGHENY LUDLUM - 06/22/2012 08:40
CARRIE MCFALL - QUALITY ASSURANCE DEPT.

PAGE 04 - FINAL PAGE

CONSIGNEE: Please Note - This consignment was turned over to carrier in first class condition, being correctly loaded, at which time our responsibility for loss or damage in shipment ceased. For your protection please examine shipment as it arrives. If any shortage or damage is discovered, have a full description made by transportation agent on waybill before signing.

Material Safety Data Sheets for this product have been supplied to your Purchasing Department. For an additional copy phone 724-226-5880. CAUTION: Processing that makes fumes, dust, or solutions may cause lung disease. See Material Safety Data Sheets for further information.

WARNING

Les fiches d'information-sécurité de ce produit ont été fournies à votre département chargé des achats. Pour obtenir des exemplaires supplémentaires veuillez téléphoner au numéro suivant 724-226-5880. Attention: les traitements entraînent la production de vapeurs, poussières, ou solutions peuvent être cause de maladies pulmonaires. Pour plus de renseignements se référer aux fiches d'information-sécurité.

The above is a true copy of data on file. The material and test results conform to the sales contract and specification(s) as set forth in Allegheny Ludlum's Order Acknowledgement.

Stephen Wells - Director, Corporate Quality Assurance

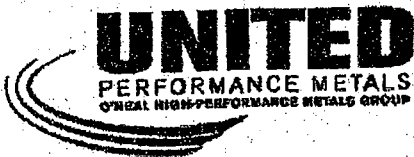
UNITED PERFORMANCE METALS

This is to certify that in accordance with the records in our files the material shipped on your purchase order conforms to the following:

Size: 100 X COIL
P.O.: 588068
Part#: 882085
Sales #: 02005283
Quantity: 4

Description: A286 ANN .003-.005 W3 AMS5525
Customer: Bristol Industries
Shipped: 02/03/2014
Heat: 518225-01

Fernando Gonzalez



3475 Symmes Road
Hamilton, OH 45015
800-347-2376

CERTIFICATE OF QUALITY COMPLIANCE

Date: 02/28/14

To: Bristol Industries
630 E. Lambert Road

Brea, CA 92821

Attention: Quality

This is to confirm that the items identified herein have been controlled per the requirements of your purchase order number 589135 and associated specifications.

Part Number:	<u>982119</u>	UPM Sales Order:	<u>02005529</u>
Description:	<u>A286 ANN .019-.021 #3 AMS5525 1.531XCOIL</u>		
Manufacturer:	<u>ALLEGHENY STE</u>		
Heat Number:	<u>520942-03</u>		

WE CERTIFY THAT THE MATERIAL SUPPLIED CONFORMS IN EVERY RESPECT WITH THE PHYSICAL AND CHEMICAL DEMANDS INDICATED IN THE PURCHASE ORDER IDENTIFIED ABOVE AND HAS BEEN SUBJECT TO THE QUALITY SYSTEM REQUIREMENTS IN ACCORDANCE WITH THE CONDITIONS OF OUR AS9100 APPROVAL.

LAB APPROVED
DATE: 3/18/14 TECH: (HFLAB-26)
Q.C. # CP28890
DFAR 252.225-7009
(252.225-7014 ALT 1)

Tim Baxter
Tim Baxter

SCANNED

**NOTICE OF SHIPMENT/
PACKING LIST**



CERTIFICATE OF TEST

AL 6168-4 1211

CUST. ORD. NO. & DATE 01023425	CUST. CODE 10/16/13 110977	ACCEPTING MILL NEW BEDFORD, MA	SHIPPER NO. 412688	PRODUCT CODE 13020116060000	MILL ORDER NUMBER 32-103-104	DATE SHIPPED 02/10/14	LCS
FORMS DISTRIBUTION SOLD TO 3 SHIP TO 1 SPEC 1	REPEAT ORDER 96781-0	DO RATE 26	PRI ORITY	MATL 2141 NEW BEDFORD	SHIPPING LOCATION MA	INVOICE 202822	
SOLD TO UNITED PERFORMANCE METALS INC 3475 SYMMES ROAD HAMILTON OH 45015		PRIME SEC. DSO DSO 516		SHIP TO UNITED PERFORMANCE METALS 3475 SYMMES ROAD HAMILTON OH 45015			

GRADE AND SPECIFICATIONS
 "ATI A286" PRECIPITATION HARDENABLE STAINLESS STEEL SHEET C R COILS ANNEALED 1BA FIN 3 EDGE (AMS 5525J) (PWA 300 REV BK) (F-14, F-17, F-22, F-23, F-MASTER) (S-1000 DATED 11/01/2012) (S-400 DTD 10/10/2011) (RR9000:SABRE) (DUAL CERTS LCS/NON-LCS) (CONTROLLED TO PWA LCS REQUIRMENTS) (UPM-QRS-001 ISS 1 REV A) (AMS 5858D) (02/04/13 EXC TO UPM-QRS-001)

CARRIER - WESTERN EXPRESS INC.

ITEM PCS	DIMENSIONS W/G/L	HEAT #	COIL #	TEST #	GROSS	TARE	NET	THEO	TAG #/	CD	SKID #
001A	1 38./020/COIL	520942	-03 09263N727	R278225	10304	189	10115		303124		
	C CUST IDENTITY 01504										
	1 SKID				10304	189	10115				

DIST: EMAIL COPY OF C/T TO TIM BAXTER TBAXTER@UPMET.COM , RAYMOND MIRANDA RMIRANDA@UPMET.COMAND JAMIE BINEGAR JAMIEBINEGAR@UPMET.COM

HEAT 520942-03	.03	.24	.014	.0003	.11	14.40	24.43	.14	1.17	.100	.22	2.02
TEST LOCATION	TC	BN	BN	TC	BN	BN	BN	BN	BN	BN	BN	BN
HEAT 520942-03	.10	.0062										
TEST LOCATION	BN	BN										

LAB APPROVED
 DATE: 3/18/14 TECH: [Signature]
 Q.C. # CP28890
 DFAR 252.225-7009
 (252.225-7014 ALT 1)

REVIEWED/APPROVED BY UPM QO

SPEC: AMS 5525J, 5858D

BY [Signature] DATE 2/13/14 TOTAL PAGES 4

PAGE 01 - CONTINUED ON PAGE 02

02/10/14 14:34:25

CONSIGNEE-Please Note-This consignment was turned over to carrier in first class condition, being correctly loaded, at which time our responsibility for loss or damage in shipment ceased. For your protection please examine shipment as it arrives. If any shortage or damage is discovered, have a full description made by transportation agent on waybill before signing.

Material Safety Data Sheets for this product have been supplied to your Purchasing Department. For an additional copy phone 724-226-5980. CAUTION: Processing that makes fumes, dust, or solutions may cause lung disease. See Material Safety Data Sheets for further information.

WARNING

Les fiches d'information-sécurité de ce produit ont été fournies à votre département chargé des achats. Pour obtenir des exemplaires supplémentaires veuillez téléphoner au numéro suivant 724-226-5980. Attention: les traitements entraînant la production de vapeurs, poussières, ou solutions peuvent, être cause de maladies pulmonaires. Pour plus de renseignements se référer aux fiches d'information-sécurité.

The above is a true copy of data on file. The material and test results conform to the sales contract and specification(s) as set forth in Allegheny Ludlum's Order Acknowledgement.

Stephen Wolf - [Signature]
 Director, Corporate Quality Assurance

Fernando Gonzalez

Size: 1.531 X COIL
 P.O. 588135
 Part: 802118
 Sales #: 02005529
 Quantity: 4

UNITED PERFORMANCE METALS
 This is to certify that in accordance with the records in our files the material shipped on your purchase order conforms to the following:

Destination: A286 ANN 018-021 MS AMS5525
 Customer: Brite Industries
 Shipper: 02/28/2014
 Heat: 520942-03

NOTICE OF SHIPMENT/
PACKING LIST



CERTIFICATE OF TEST

AL 6168-4 1211

CUST. ORD. NO. & DATE 01023425		CUST. CODE 10/16/13 110977	ACCEPTING MILL NEW BEDFORD, MA	SHIPPER NO. 412688	PRODUCT CODE 13020116060000	MILL ORDER NUMBER 32-103-104	DATE SHIPPED 02/10/14
FORMS DISTRIBUTION SOLD TO → 3 SHIP TO → 1 SPEC → 1		REPEAT ORDER 96781-0	DO RATE ORITY 26	GOVT CONTRACT	MATL 2141 NEW BEDFORD	SHIPPING LOCATION MA	INVOICE 202822
SOLD TO UNITED PERFORMANCE METALS INC 3475 SYMMES ROAD HAMILTON OH 45015		PRIME SEC. DSO DSO 516	SHIP TO UNITED PERFORMANCE METALS 3475 SYMMES ROAD HAMILTON OH 45015				

GRADE "ATI A286" PRECIPITATION HARDENABLE STAINLESS STEEL SHEET C R COILS ANNEALED 1BA FIN 3 EDGE

CARRIER - WESTERN EXPRESS INC.

ITEM TEST NO	TEST CONDITION	YIELD PSI	TENSILE PSI	% ELONG IN 2"	HARDNESS	BEND	GRAIN SIZE	STRESS CORROSION	CORROSION SALT SPRAY
001A R278225	AS RECEIVED	T*55500	102000	41.	85.HR15TW	T PASS NR	NR	NR	NR
TEST LOCATION	TC	TC	TC	TC	TC	TC			
	HT1 AT	*119000	164000	20.	50.HR30N				
TEST LOCATION	TC	TC	TC	TC	TC				
	ROOM TEMP				52.HR30N				
	* Y.S. BY 0.2% OFFSET METHOD								
ITEM TEST NO	AVERAGE	(1) STRESS			P&W E-25				
001A R278225	GRAIN SIZE	MACROETCH	RUPTURE	TRAN BEND					
	10.	PASS	33.4 HRS	2.					
TEST LOCATION	TC	PASS	DISCONTINU						
	TC	TC	TC	TC					

NR = DATA NOT REQUIRED
METALLOGRAPHIC MAGNIFICATION: 100X ETCHANT USED: OXALIC ACID

GRADE VERIFICATION WAS CARRIED OUT SPECTROSCOPICALLY

DIN EN 10204:2005 - 3.1 CERTIFICATE DOES NOT INDICATE PED APPROVAL FOR THIS MATERIAL.

ATI ALLEGHENY LUDLUM DOES NOT USE MERCURY IN THE TESTING OR PRODUCTION OF ITS PRODUCTS.

SAMPLES TESTED PER AMS 5525 WERE TREATED AT 1325 DEG. F (718 C) FOR 16 HOURS AND AIR COOLED TO ROOM TEMPERATURE PRIOR TO TESTING.

PAGE 02 - CONTINUED ON PAGE 03

02/10/14 14:34:25

CONSIGNEE: Please Note - This consignment was turned over to carrier in first class condition, being correctly loaded, at which time our responsibility for loss or damage to shipment ceased. For your protection please examine shipment as it arrives. If any shortage or damage is discovered, have a full description made by transportation agent on waybill before signing.

Material Safety Data Sheets for this product have been supplied to your Purchasing Department. For an additional copy, please call 724-226-5980. CAUTION: Processing that makes fumes, dust, or solutions may cause lung disease. See Material Safety Data Sheets for further information.

WARNING

Les fiches d'information-sécurité de ce produit ont été fournies à votre département chargé des achats. Pour obtenir des exemplaires supplémentaires, veuillez téléphoner au numéro suivant 724-226-5980. Attention: les traitements entraînant la production de vapeurs, poussières, ou solutions peuvent être cause de maladies pulmonaires. Pour plus de renseignements se référer aux fiches d'information-sécurité.

The above is a true copy of data on file. The material and test results conform to the sales contract and specification(s) as set forth in Allegheny Ludlum's Order Acknowledgement.

Stephen Wolf - Director, Corporate Quality Assurance

Description: A286 ALN 018-021-13 AMS5525
Customer: Bilgic Industries
Shipped: 02/28/2014
Heat: 620442-03

Size: 1.831 X COIL
P.O.: 588133
Part#: 882119
Sales #: 02005529
Quantity: 4

UNITED PERFORMANCE METALS
This is to certify that in accordance with the records in our files the material shipped on your purchase order conforms to the following.

Fernando Gonzalez

LAB APPROVED
DATE: 3/8/14 TECH: JHM-26
Q.C. # CP28890
DEAR 252.225-7009
(252.225-7014 ALT 1)

NOTICE OF SHIPMENT/
PACKING LIST



CERTIFICATE OF TEST

AL 6168-4 1211

CUST. ORD. NO. & DATE 01023425		CUST. CODE 10/16/13 110977	ACCEPTING MILL NEW BEDFORD, MA	SHIPPER NO. 412688	PRODUCT CODE 13020116060000	MILL ORDER NUMBER 32-103-104	DATE SHIPPED 02/10/14
FORMS DISTRIBUTION SOLD TO → 3 SHIP TO → 1		REPEAT ORDER 96781-0	DO RATE 26	GOVT CONTRACT	MATL 2141 NEW BEDFORD	SHIPPING LOCATION MA	INVOICE 202822
SOLD TO UNITED PERFORMANCE METALS INC 3475 SYMMES ROAD HAMILTON OH 45015		PRIME SEC. DSO DSO 516	SHIP TO UNITED PERFORMANCE METALS 3475 SYMMES ROAD HAMILTON OH 45015				

GRADE
"ATI A286" PRECIPITATION HARDENABLE STAINLESS STEEL SHEET C R COILS ANNEALED 1BA FIN 3 EDGE
WESTMORELAND MECHANICAL TESTING & RESEARCH, YOUNGSTOWN, PA (T7869) IS A GEAE S400 AND ISO/IEC 17025 APPROVED FACILITY.

THIS DIN EN 10204:2005 - 3.1 CERTIFICATE OF TEST SHALL NOT BE REPRODUCED EXCEPT IN FULL. FEDERAL LAW PROHIBITS THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE AND MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL LAW. ATI AL HOLDS SEVERAL QUALITY CERTIFICATIONS THAT INCLUDE ISO-9001, AS9100, AND ISO/IEC 17025. MATERIAL WAS MANUFACTURED IN ACCORDANCE WITH THE ATI AL QUALITY MANUAL REVISION 22 DATED 7/10/2013.

ATI ALLEGHENY LUDLUM WORKS TO THE ROLLS ROYCE SABRE QUALITY MANAGEMENT SYSTEM.

ATI ALLEGHENY LUDLUM PERFORMS CHEMICAL ANALYSIS BY THE FOLLOWING TECHNIQUES:
C, S BY COMBUSTION/INFRARED
N, O, H BY INERT FUSION/THERMAL CONDUCTIVITY
MN, P, SI, CR, NI, MO, CU, CB, CO, V BY WDXRF
B BY OES
AL AND TI (>=0.10%) BY WDXRF, OTHERWISE BY OES
PE, BI, AG BY GFAA

MATERIAL TESTED AT ATI ALLEGHENY LUDLUM GEAE S400 APPROVED FACILITIES (T1225 & T9317):
NATRONA HEIGHTS, PA TECHNICAL CENTER; BRACKENRIDGE, PA AND NEW BEDFORD, MA.

ATI ALLEGHENY LUDLUM HOLDS SEVERAL QUALITY AND LABORATORY CERTIFICATIONS THAT INCLUDE ISO-9001, AS9100, AD 2000-MERKBLATT WO, EU PRESSURE EQUIPMENT DIRECTIVE 97/23/EC, NADCAP, ISO/EIC 17025, GEAE S400, GEAE S-1000. REFER TO WWW.ALLEGHENYLUDLUM.COM TO ACCESS THE CURRENT ATI AL QUALITY CERTIFICATIONS.

PAGE 03 - CONTINUED ON PAGE 04

02/10/14 14:34:25

CONSIGNEE-Please Note-This consignment was turned over to carrier in first class condition, being correctly loaded, at which time our responsibility for loss or damage in shipment ceased. For your protection please examine shipment as it arrives. If any shortage or damage is discovered, have a full description made by transportation agent on waybill before signing.

Material Safety Data Sheets for this product have been supplied to your Purchasing Department. For an additional copy phone 724-225-5980. CAUTION: Processing that makes fumes, dust, or solutions may cause lung disease. See Material Safety Data Sheets for further information.

WARNING

Les fiches d'information-sécurité de ce produit ont été fournies à votre département chargé des achats. Pour obtenir des exemplaires supplémentaires veuillez téléphoner au numéro suivant 724-225-5980. Attention: les traitements entraînant la production de vapeurs, poussières, ou solutions peuvent être cause de maladies pulmonaires. Pour plus de renseignements se référer aux fiches d'information-sécurité.

The above is a true copy of data on file. The material and test results conform to the sales contract and specification(s) as set forth in Allegheny Ludlum's Order Acknowledgement.

Stephen Wolff -
Director, Corporate Quality Assurance

Description: A286 Alloy 019-021 AS AMS5525
Customer: Rapid Industries
Shipper: 02/28/2014
Heat: 520842-03

Size: 1.531 X COIL
P.O.: 588135
Part#: 882118
Sales #: 02005529
Quantity: 4

UNITED PERFORMANCE METALS
This is to certify that in accordance with the records in our files the material shipped on your purchase order conforms to the following:

Fernando Gonzalez

LAB APPROVED
DATE: 2/10/14 TECH: [Signature]
Q.C. # C928890
DFAR 252.225-7009
(252.225-7014 ALT 1)

**NOTICE OF SHIPMENT/
PACKING LIST**



CERTIFICATE OF TEST

AL 6163-4 1211

CUST. ORD. NO. & DATE		CUST. CODE		ACCEPTING MILL		SHIPPER NO.		PRODUCT CODE		MILL ORDER NUMBER		DATE SHIPPED	
01023425		10/16/13		110977		NEW BEDFORD, MA		412688		13020116060000		32-103-104	
FORMS DISTRIBUTION		SHIP TO		SPEC		REPEAT ORDER		DO RATE		SHIPPING LOCATION		INVOICE	
SOLD TO		SHIP TO		SPEC		96781-0		25		2141 NEW BEDFORD		MA 202822	
UNITED PERFORMANCE METALS INC		SOLD TO		PRIME SEC.		DSO		DSO		SHIP TO		UNITED PERFORMANCE METALS	
3475 SYMMES ROAD		HAMILTON		OH 45015		516		516		HAMILTON		OH 45015	

GRADE "ATI A286" PRECIPITATION HARDENABLE STAINLESS STEEL SHEET C R COILS ANNEALED 1BA FIN 3 EDGE

MATERIAL WAS SOLUTION ANNEALED AT 1800F +/- 25F (982C +/- 14C) FOR A TIME COMMENSURATE WITH SECTION THICKNESS AND COOLED AT A RATE EQUIVALENT TO AIR COOL OR FASTER.

STRESS RUPTURE - CONTINUOUS AXIAL STRESS OF 67500 PSI AT 1200F (465 MPA AT 649C) MATERIAL </.1874.

STRESS RUPTURE - CONTINUOUS AXIAL STRESS OF 70000 PSI AT 1200F (483 MPA AT 649C) MATERIAL >.1874.

TESTING WAS PERFORMED AT THE FOLLOWING LOCATIONS:

BN = ATI-ALLEGHENY LUDLUM; 100 RIVER ROAD; BRACKENRIDGE, PA 15014

TC = ATI-ALLEGHENY LUDLUM; 1300 PACIFIC AVENUE; NATRONA HEIGHTS, PA 15065

FOR ACCESS TO ONLINE CERTIFICATES OF TEST
REGISTER AT WWW.ALCEXTRA.COM

LAB APPROVED
DATE: 3/18/14 TECH: JEB-75
O.C. # 0228000
DFAR 252.225-7009
(252.225-7014 ALT 1)

Description: A286 ANN 019-021 AS AMS5525
Customer: Global Industries
Shipped: 02/28/2014
Heat: S20842-AS

Size: 1.531 X COIL
P.O.: 589135
Part: 582119
Sales #: 02055328
Quantity: 4

UNITED PERFORMANCE METALS
This is to certify that in accordance with the records in our files the material shipped on your purchase order conforms to the following:

Fernando Gonzalez

PAGE 04 - FINAL PAGE.

02/10/14 14:34:25

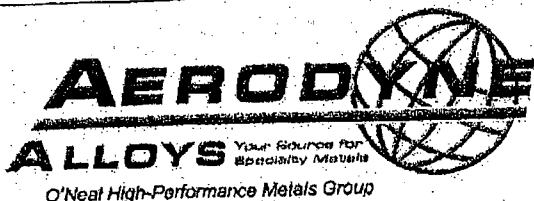
CONSIGNEE-Please Note-This consignment was turned over to carrier in first class condition, being correctly loaded, at which time our responsibility for loss or damage in shipment ceased. For your protection please examine shipment as it arrives. If any shortage or damage is discovered, have a full description made by transportation agent on waybill before signing.

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WARNING
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The above is a true copy of data on file. The material and test results conform to the sales contract and specification(s) as set forth in Allegheny Ludlum's Order Acknowledgement.

Stephen Wolf
Director, Corporate Quality Assurance



Packing List

Packing List
Cust/Ship to

14605-1
546/0



Shipment Dt 2/19/2014

Ship-To
Bristol Industries
630 E. Lambert Rd.
Brea, CA 92821

Issued from
Aerodyne Alloys, LLC, California Facility
14941 East Northam Street
La Mirada, CA 90638

Sold-To
Bristol Industries
630 E. Lambert Rd.
Brea, CA 92821

Divy Mthd
Carrier
Item
Our Order

Com Carrier PPD
non stop

Product
Your PO
Delivery

589113 (2/11/2014)
Prepaid (Included)

To
Ref

Vehicle No
Trailer No

1-1 A-286 5853 CLA CR - BAR
0.51" OD x 144"

Ingot
2

Heat
970237

Tag
5448

Lift
BDL-11859

Pcs
101

LBS
854

Shp MI
1 0

Certificate
Mill Cert

2-1 A-286 5853 CLA CR - BAR
1.26" OD x 138"
TWO HEATS OK
786# IN ONE HEAT
BALANCE IN THE OTHER HEAT
DELIVERED PRICING
CA STOCK

Ingot
3
3

Heat
970324
970316

Tag
3872A
3065

Lift
BDL-11860
BDL-11861

Pcs
22
16

LBS
1,071
786

Total 38

Shp MI
1 0

Certificate
Mill Cert

Total for the Shipment

Bundle/Cleats/Straps (BDL-11859)
Bundle/Cleats/Straps (BDL-11860)
Bundle/Cleats/Straps (BDL-11861)

Gross	Tare	Net (LBS)
854		854
1,071		1,071
786		786
2,711		2,711

Inside Sip
Taken-by Sip

Patty Negoro
Patty Negoro

(800) 337-3766 Ext 148
(800) 337-3766 Ext 148

(559) 275-7033
(559) 275-7033

***** Aerodyne Alloys, LLC - Certificate of Conformance *****

Aerodyne Alloys, LLC certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected and tested in accordance with the material specifications. This material was processed in accordance with Aerodyne Alloys, LLC Quality Manual Rev 28, dated February 1, 2013. These records are on file at Aerodyne Alloys, LLC. This material is free of weld repair and has not come in contact with mercury or other low melting point alloys during storage or processing at Aerodyne Alloys, LLC. Packaging material used for shipments to Europe or China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing materials. The recording of false or fictitious or fraudulent statements on this document may result in a felony under federal statutes. Please contact Sowin Kong/Aerodyne Alloys, LLC Quality Manager @ 1-800-243-4344 ext. 147 or skong@aerodynealloys.com if you have any questions.

Electronically Generated Certificate - Valid with digital signature on the Picking List date shown above

Sowin Kong
Sowin Kong, Quality Manager

Aerodyne Alloys, LLC is registered by TRC (The Register Company, Inc.)
AS 9120 Rev A ISO 9001:2008

SCANNED

LAB APPROVED
DATE: 2/29/14 TECH:
Q.C. # ES 28812
DFAR 252.225-7009
(252.225-7014 ALT 1)

Warehouse Copy

2/19/2014 12:54 PM ③

1

Our Order 414709-1-1 Your Order 589113
Heat 970237 Ingt2 Form R286R1

Size 00510

Packing List 14805-1 (2/19/2014) PCS 101 WGT(lbs) 854
Bristol Industries

CERTIFICATE OF TESTS ABNAHMEPRUEFZEUGNIS CERTIFICAT DE CONTROLE

CERT SERIAL# 000866303



CARPENTER

Carpenter Technology Corporation
161 West Bern Street, Reading, Pa. 19801
Tel: (610) 208-2000 (800) 338-4592

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT SHALL BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

03/12/13
CUSTOMER/BESTELLER/CLIENT

SELER/VERKÄUFER/VENDEURPAGE 1 OF 6

AERODYNE ALLOYS LLC
350 PLEASANT VALLEY
SOUTH WINDSOR, CT 06074

ALN

CUSTOMER ORDER NO./BESTELL.-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATE/DATE	WEIGHT/GEWICHT/POIDS
ACA-3359 LINE 001	W73045	03/11/13	3098

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE: 970237

PRODUCT DESCRIPTION: A286 ANL COLD WORKED GROUND CAP TENSILE MIN 160.0 KSI

SPECIFICATION: AMS 5731 REAFFIRMED HEADING STK. (CAP OF) REV L (07/12)
SPS SPS-M-118 REV L (05/20/97)
AMS 5734 REAFFIRMED HEADING STK. (CAP OF) REV K (07/12)
AMS 5736 HEADING STK. (CAP OF) REV G (12/15/74)
AMS 5737 REAFFIRMED HEADING STK. (CAP OF) REV P (07/12)
AMS 5732 REAFFIRMED HEADING STK. (CAP OF) REV J (07/12)
AMS 5853 REV C REAFFIRMED (04/12) (15-17% CW)
HI SHEAR 140 TYPE I (15-17% CW) REV AD (03/22/12) EXCEPT LTR
(11/05/12) PENDING
GE S-400 (10/15/12)
GE S-1000 (11/01/12)
FAIRCHILD MS 314 "CLASS B" REV 4 (01/17/03) CHEMISTRY ONLY
FAIRCHILD MS 314 "CLASS A" REV 4 (01/17/03) CHEMISTRY ONLY
ROLLS ROYCE RR9000, SABRE LATEST REVISION
AMS 2806 REV C (03/08)

SIZE 0.510000 IN. (12.95 MM) RD BAR INGOT 2

PRIMARY HEAT CHEMISTRY (WT%):

C 0.03	MN 0.26	SI 0.07	P 0.015	LT S 0.001	CR 13.86
NI 24.69	MO 1.30	CU 0.09	CO 0.05	AL 0.19	TI 2.17
V 0.25	B 0.006	LT BI 0.0003	FE BALANCE	LT PB 0.0003	

GEAG SUPPLIER CODE - 21100/CARPENTER
GEAG SUPPLIER CODE - T4314/LABTROBE SPECIALTY STEEL CO.

MATERIAL MANUFACTURED AND SUPPLIED IN ACCORDANCE WITH RR9000: SABRE REQUIREMENTS.

CAPABLE OF PASSING THE SHEAR TEST.

THIS HEAT MELTED BY THE VACUUM ARC REMELTING PROCESS.

LAB APPROVED

DATE: 2/27/14 TECH: CHAB-26
Q.C. #ES28812
DFAR 252.225-7009
(252.225-7014 ALT 1)

CONTINUED ON NEXT PAGE

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for any representation or certification to other parties.
Die vorliegende Zertifikatierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keine Verantwortung für die ausgetroffenen Daten oder Zertifikatierung.
Ce certificat est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.

CERTIFICATE OF TESTS

CERT SERIAL# 000866303



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE IN SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

SELLER / VERKAUFER / VENDEUR PAGE 2 OF 6

03/12/13

CUSTOMER / BESTELLER / CLIENT

AERODYNE ALLOYS LLC
350 PLEASANT VALLEY
SOUTH WINDSOR, CT 06074

ALN

CUSTOMER ORDER NO. / BESTELL-NR. / N° DE COMMANDE	CARPENTER NO. / WERKS-NR. / N° DE REFERENCE INTERIE	DATE / DATUM / DATE	WEIGHT / GEWICHT / POIDS
ACA-3359 LINE 001	W73045	03/11/13	3098

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE: 970237

THE SUPPLIES DETAILED HAVE BEEN MANUFACTURED / INSPECTED / TESTED AND UNLESS OTHERWISE STATED, CONFORM IN ALL RESPECTS TO THE RELEVANT SPECIFICATIONS, DRAWINGS AND PURCHASE ORDER REQUIREMENTS.

MATERIAL IS FREE FROM MERCURY CONTAMINATION.

HEAT TREATMENT PERFORMED IN FURNACES CALIBRATED TO AMS 2750 AS REQUIRED BY AMS-H-6875.

TEST COUPON WAS A PROLONGATION CUT FROM THIS PRODUCTION MATERIAL AFTER FINAL HEAT TREATMENT.

THE TEST COUPON WAS THE SAME SHAPE, SIZE, AND IN THE SAME CONDITION AS PARENT MATERIAL.

HOT WORK REDUCTION RATIO EXCEEDS 8:1

DISCS MACROETCH TESTED AND APPROVED.

MILL HEAT TREATMENT:

TYPE SOLUTION ANNEAL
TEMP 1800F (982C)
AT TEMP CONTINUOUS FURNACE
QUENCH WATER

QUENCH MEDIA: ANNEAL - WATER

HEAT TREAT MONITOR METHOD: ANNEAL - TIME CHARGE

16 PERCENT COLD WORK

GRAIN SIZE PER ASTM E112: 7 (KALLINGS)

(T) RANSVERSE (L) ONGITUDINAL
TENSILE STRENGTH, KSI (MPA) 114.0 (786)
REDUCTION OF AREA % 64.0
ACTUAL SPECIMEN SIZE .500"

ETA PHASE (KALLINGS)
ACCEPTABLE TO HIGH SHEAR 140 BETTER THAN FIG.1

LAB APPROVED

DATE: 2/27/14 TECH: [Signature]

Q.C. # ES28812

CONTINUED ON NEXT PAGE 252.225-7009
(252.225-7014 ALT 1)

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CERTIFICATE OF TESTS

CERT SERIAL# 000866303



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19801
Tel: (610) 208-2000 (800) 333-4592

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
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03/12/13

CUSTOMER/BESTELLER/CLIENT

SELLER/VERKÄUFER/VEHDEUR PAGE 3 OF 6

AERODYNE ALLOYS LLC
350. PLEASANT VALLEY
SOUTH WINDSOR, CT 06074

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GERICHT/POIDS
ACA-3359 LINE 001	W73045	03/11/13	3098

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE

970237

CAPABILITY (FINISH TESTING)

1800 F (982 C), 01 HR
1325 F (718 C), 16 HR

OIL TREAT
AIR COOL

(MIDRADIUS)

HARDNESS , HRC

27

COMBINATION STRESS RUPTURE
TEST TEMP 1200 F (649 C)
STRESS, KSI (MPA) 70.0 (483)
ELONGATION % 21.9
HOURS 86.8

AFTER MINIMUM TIME UNDER SPECIFIED STRESS, THE STRESS RUPTURE TEST WAS OVERLOADED IN INCREMENTS AS FOLLOWS:

TOTAL HOURS	STRESS KSI (MPA)
49	75.0 (517)
62	80.0 (552)
70	85.0 (586)
78	90.0 (621)
86	95.0 (655)

(T)RANSVERSE (L)ONGITUDINAL
YIELD STRENGTH (0.20 %) KSI (MPA)
TENSILE STRENGTH KSI (MPA)
ELONGATION IN 2.00" %
REDUCTION OF AREA %
ACTUAL SPECIMEN SIZE .500"

L	T
100.0 (689)	162.0 (1117)
26.0	
50.0	

GRAIN SIZE PER ASTM E112: 7

(KALLINGS)

LAB APPROVED

DATE: 2/27/14 TECH:

Q.C. # ES28812

DFAR 252.225-7009

(252.225-7014 ALT 1)

CONTINUED ON NEXT PAGE

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CERTIFICATE OF TESTS
CERT SERIAL# 000866303

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CERTIFICAT DE CONTROLE



CARPENTER

Carpenter Technology Corporation
101 West Barn Street, Reading, Pa. 19801
Tel: (610) 208-2000 (800) 338-4592

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03/12/13

CUSTOMER / BESTELLER / CLIENT

SELLER / VERKÄUFER / VENDEUR PAGE 4 OF 6

AERODYNE ALLOYS LLC
350 PLEASANT VALLEY
SOUTH WINDSOR, CT 06074

ALN

CUSTOMER ORDER NO. / BESTELL-NR. / N° DE COMMANDE	CARPENTER NO. / WERKS-NR. / N° DE REFERENCE INTERNE	DATE / DATUM / DATE	WEIGHT / GEWICHT / POIDS
ACA-3359 LINE 001	W73045	03/11/13	3098

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE: 970237

CAPABILITY (FINISH TESTING)

1650 F (899 C) 02 HR OIL TREAT
1325 F (718 C) 16 HR AIR COOL

HARDNESS , HRC - 31 (MIDRADIUS)

COMBINATION STRESS RUPTURE
TEST TEMP 1200 F (649 C)
STRESS, KSI (MPA) 65.0 (448)
ELONGATION % 28.8
HOURS 93.7

AFTER MINIMUM TIME UNDER SPECIFIED STRESS, THE STRESS RUPTURE TEST WAS OVERLOADED IN INCREMENTS AS FOLLOWS:

TOTAL HOURS	STRESS KSI (MPA)
54	70.0 (483)
63	75.0 (517)
77	80.0 (552)
85	85.0 (586)
93	90.0 (621)

(T) TRANSVERSE	(L) LONGITUDINAL	L
YIELD STRENGTH (0.20 %) KSI (MPA)	103.0 (710)	
TENSILE STRENGTH, KSI (MPA)	163.0 (1124)	
ELONGATION IN 2.00", %	25.0	
REDUCTION OF AREA, %	50.0	
ACTUAL SPECIMEN SIZE .500"		

GRAIN SIZE PER ASTM E112: 7 (KALLINGS)

LAB APPROVED

DATE: 4/21/14 TECH: [Signature]

Q.C. # E528812

DFAR 252.225-7009

(252.225-7014 ALT 1)

CONTINUED ON NEXT PAGE

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CERTIFICATE OF TESTS

CERT SERIAL# 000866303



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

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03/12/13

CUSTOMER/BESTELLER/CLIENT

AERODYNE ALLOYS LLC
350 PLEASANT VALLEY
SOUTH WINDSOR, CT 06074

SELLER/VERKÄUFER/VENDEUR PAGE 5 OF 6

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
ACA-3359 LINE 001	W73045	03/11/13	3098

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEUR: 970237

CAPABILITY (FINISH TESTING)

1250 F (677 C), 08 HR AIR COOL

***MACHINE & TEST AT WESTMORELAND MECHANICAL TESTING & RESEARCH, INC.
AVERAGE SHEAR STRENGTH, KSI(MPA) 99.9 (689)

(T) RANSVERSE (L) ONGITUDINAL
YIELD STRENGTH, (0.20 %) KSI(MPA) 160.0 (1103)
TENSILE STRENGTH, KSI(MPA) 181.0 (1248)
ELONGATION IN 2.00", % 17.0
REDUCTION OF AREA, % 45.0
ACTUAL SPECIMEN SIZE .498" 38.0
HARDNESS, HRC
GRAIN SIZE PER ASTM E112: 7 (KALLINGS)

CAPABILITY (BILLET TESTING)

1800 F (982 C), 01 HR OIL TREAT
1325 F (718 C), 16 HR AIR COOL

COMBINATION STRESS RUPTURE
TEST TEMP 1200 F (649 C)
STRESS, KSI(MPA) 70.0 (483)
ELONGATION % 27.7
HOURS 78.5

AFTER MINIMUM TIME UNDER SPECIFIED STRESS, THE STRESS RUPTURE TEST WAS OVERLOADED IN INCREMENTS AS FOLLOWS:

TOTAL HOURS	STRESS KSI(MPA)
52	75.0 (517)
60	80.0 (552)
68	85.0 (586)
76	90.0 (621)

(T) RANSVERSE (L) ONGITUDINAL
YIELD STRENGTH, (0.20 %) KSI(MPA) 105.0 (724)
TENSILE STRENGTH, KSI(MPA) 161.0 (1110)
ELONGATION IN 2.00", % 26.0
REDUCTION OF AREA, % 48.0
HARDNESS, HBW 315.0

LAB APPROVED

DATE: 2/27/14 TECH:
Q.C. #ES28812
DFAR 252.225-7009
(252.225-7014 ALT 1)

CONTINUED ON NEXT PAGE

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CERTIFICATE OF TESTS
CERT SERIAL# 000866303



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (300) 338-4592

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SELLER/VERKÄUFER/VEHDEUR PAGE 6 OF 6

03/12/13
CUSTOMER/BESTELLER/CLIENT

AERODYNE ALLOYS LLC
350 PLEASANT VALLEY
SOUTH WINDSOR, CT 06074

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
ACA-3359 LINE 001	W73045	03/11/13	3098

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEUR: 970237

CAPABILITY (BILLET TESTING)
1650 F (899 C) ; 02 HR
1325 F (718 C) ; 16 HR

COMBINATION STRESS RUPTURE
TEST TEMP 1200 F (649 C)
STRESS KSI (MPA) 65.0 (448)
ELONGATION % 38.2
HOURS 76.9

AFTER MINIMUM TIME UNDER SPECIFIED STRESS, THE STRESS RUPTURE TEST WAS OVERLOADED IN INCREMENTS AS FOLLOWS:
TOTAL HOURS STRESS KSI (MPA)
52 70.0 (483)
60 75.0 (517)
68 80.0 (552)
76 85.0 (586)

LAB APPROVED
DATE: 2/27/14 TECH: _____
Q.C. # ES 28812
DFAR 252.225-7009
(252.225-7014 ALT 1)

(T) RANSVERSE (L) LONGITUDINAL
YIELD STRENGTH (0.20 %) KSI (MPA) 109.0 (752)
TENSILE STRENGTH KSI (MPA) 163.0 (1124)
ELONGATION IN 2.00" % 24.0
REDUCTION OF AREA, % 43.0
HARDNESS, HBW 333.0

MATERIAL HAS BEEN MELTED IN USA OR QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1, SUPERSEDED BY DFARS REQUIREMENTS DFARS 252.225-7008 AND 252.225-7009. THIS ORDER WAS MANUFACTURED IN ACCORDANCE WITH CARPENTER SPECIALTY ALLOYS OPERATIONS QUALITY PROGRAM MANUAL, REVISION 30 DATED 09/28/11.

CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF NOVEMBER 24, 2010 TO THE REQUIREMENTS OF ISO 9001:2008 APPROVAL CERTIFICATE 10-1385R BY PERFORMANCE REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH 3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS, AS DOCUMENTED IN THIS CERTIFICATE OF TESTS.

TEST METHODS ARE PER THE ASTM STANDARDS ON FILE AND IN EFFECT AT TIME OF ORDER ACCEPTANCE, STANDARD PRACTICES, OR AS AGREED UPON BETWEEN CARPENTER & CUSTOMER.

SHERRY L KREIDER
ADMINISTRATOR - QUALITY
CARPENTER TECHNOLOGY CORPORATION

Sherry Kreider

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B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO25150

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
12	100	EA	MS21060-3K		5318802-000	ALCOA KAYNAR FULLERT	15653		


Jason Lewis
Vice President of Quality

07/25/14

Alcoa Fastening Systems



Packing Slip



Packing Slip: 9947956121

Page: 1

Bill To: 5574
M & M AEROSPACE
HARDWARE, INC.
P.O. BOX 025263
MIAMI FL 33102-5263
USA

Ship To: (1)
M & M AEROSPACE
10000 N.W. 15TH TERRACE
MIAMI FL 33172

From:
ALCOA FASTENING SYSTEMS
AEROSPACE PRODUCTS
FULLERTON OPERATIONS
800 SOUTH STATE COLLEGE
FULLERTON CA 92831
USA

Order Contact:

Pack Date Order # Cust PO

Ship Via

Weight Pkgs #

09/10/09 F296602 OE656

Line/Rel	Item	U/M	Qty Ordered	Qty To Pack
14-1	BG5500 F5031-3BC	EA	25,000	24,565

C/I: BACN10JR3CFR
PO Item #:

*** TSO C-148 APPVD PART. TSO LABEL REQ'D ***

Cust Date: 09/21/09
Kay Date: 09/16/09

Lot: 5318802-000

COO:MEXICO

Waybill:

ECCN:9A991 Schedule-B Number:7318.16.0000

The export classification appears above. You are responsible for all related export license requirements.

CHEM & PHYS & MFG C OF C REQ

DUAL CERT TO NAS1031C3K, NAS686C3K AND M

S21060-3K

BILL LINE 14,15,16 & 17 TOGETHER

BUYER:DIMITRIS

PHONE: 30

ALCOA GLOBAL FASTENERS, INC.

Kaynar Products: Cage Code 15653

Eagle Products: Cage Code 66776

Rosan Products: Cage code 66776

ALL CLAIMS REGARDING THIS ORDER MUST BE REPORTED TO SELLER PROMPTLY. CLAIMS FOR CREDIT OR REPLACEMENT OF PARTS MAY BE LIMITED TO THOSE PARTS FOR WHICH TRACEABILITY HAS BEEN MAINTAINED BY THE BUYER. THE SELLER'S MANUFACTURING LOT IDENTIFICATION NUMBER AND RETURN MERCHANDISE AUTHORIZATION (RMA) NUMBER MUST ACCOMPANY ALL RETURNS. ANY CLAIM BASED ON AN ALLEGED DISCREPANCY IN QUANTITY, QUALITY, ETC. BETWEEN THE GOODS ACTUALLY SHIPPED AND/OR DELIVERED UNDER THESE DOCUMENTS AND THE DESCRIPTION THEREOF IN THESE DOCUMENTS, MUST BE MADE IN WRITING TO SELLER NOT LATER THAN NINETY (90) DAYS AFTER THE SHIPPING DATE APPEARING HEREON. FOR ITEMS CERTIFIED TO BPS-N-70, ALLOY VERIFICATION HAS BEEN PERFORMED ON PARTS WITH A DATE OF MANUFACTURE ON OR AFTER JANUARY 1, 2001. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

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MIAMI FL 33102-5263
USA

Ship To: (1)
M & M AEROSPACE
10000 N.W. 15TH TERRACE
MIAMI FL 33172

From:
ALCOA FASTENING SYSTEMS
AEROSPACE PRODUCTS
FULLERTON OPERATIONS
800 SOUTH STATE COLLEGE
FULLERTON CA 92831
USA

Order Contact:

Pack Date	Order #	Cust PO	Ship Via	Weight	Pkgs #
09/10/09	F296602	OEV656			

Line/Rel	Item	U/M	Qty Ordered	Qty To Pack
5-592-5155	<p>"MATERIAL COMPLIES WITH DFARS 252.225-70 14 REQUIREMENTS, "PREFERENCE FOR DOMESTIC SPECIALTY METALS" WITH ITS ALTE RNATE 1 APPLIES. ****ALLOWABLE SHIPPING TOLERANCE = +5%-1 0% ***** CHEM & PHYS & MFG C OF C REQ "MUST STATE COUNTRY OF ORIGIN WHERE PARTS WERE MANUFACTURED ON CERTIFICATION FOR EACH LOT NUMBER" ALL I TEMS ON THIS PO MUST BE NEW AND TO THE LATEST REV MFGS NAME & LOT# MUST APP EAR ON PACKING SLIP ON ALL PAPER WORK FOR ALL ITEMS. ***** ***** IF UNDER 150 # SHIP VIA FED EX GROUND SERVICE: BI LL RECIPIENT ACCT: 0331-0149-0. IF OVER 150 # USE FED X NAT'L(WATKINS) ACCT . # 018757. CUST REF: MUST BE THEIR</p>			

ALCOA GLOBAL FASTENERS, INC.

Kaynar Products: Cage Code 15653 • Eagle Products: Cage Code 66776 • Rosan Products: Cage code 66776

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USA

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10000 N.W. 15TH TERRACE
MIAMI FL 33172

From:
ALCOA FASTENING SYSTEMS
AEROSPACE PRODUCTS
FULLERTON OPERATIONS
800 SOUTH STATE COLLEGE
FULLERTON CA 92831
USA

Order Contact:

Pack Date Order # Cust PO

Ship Via

Weight Pkgs #

09/10/09 F296602 OE656

Line/Rel	Item	U/M	Qty Ordered	Qty To Pack
----------	------	-----	-------------	-------------

PO # "DO NOT PREPAY & ADD TO ANY OF THE
ABOVE METHODS" & "CONSOLIDATE
SHIPMENTS WHERE EVER APPROPRIATE" DO NOT
SHIP PARTS BY ANY OTHER CARRIER
THAN THOSE LISTED ABOVE, WITHOUT PROPER
WRITTEN AUTHORIZATION FROM M&M
ECCN OR ITAR AND SCHEDULE B NUMBERS ARE
REQUIRED ON PACKER AND
CERTIFICATIONS.
chem & phys certs.

ALCOA GLOBAL FASTENERS, INC.

Kaynar Products: Cage Code 15653 • Eagle Products: Cage Code 66776 • Rosan Products: Cage code 66776

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Page: 1

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HARDWARE, INC.
P.O. BOX 025263
MIAMI FL 33102-5263
USA

Ship To: (1)
M & M AEROSPACE
10000 N.W. 15TH TERRACE
MIAMI FL 33172

From:
ALCOA FASTENING SYSTEMS
AEROSPACE PRODUCTS
FULLERTON OPERATIONS
800 SOUTH STATE COLLEGE
FULLERTON CA 92831
USA

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Order Contact:

Pack Date	Order #	Cust PO	Ship Via	Weight	Pkgs #
09/10/09	F296602	OE656			

Line/Rel	Item	U/M	Qty Ordered	Qty To Pack
14-1	BG5500 F5031-3BC	EA	25,000	24,565

C/I: BACN10JR3CFR *Rev. AB*
PO Item #:
*** TSO C-148 APPVD PART. TSO LABEL REQ'D ***

Cust Date: 09/21/09
Kay Date: 09/16/09

Lot: 5318802-000 COO:MEXICO
Waybill: ECCN:9A991 Schedule-B Number:7318.16.0000

The export classification appears above. You are responsible for all related export license requirements.

CHEM & PHYS & MFG C OF C REQ *Rev. 6*
DUAL CERT TO NAS1031C3K, NAS686C3K AND M *Rev. 12*
S21060-3K *Rev. New*
BILL LINE 14,15,16 & 17 TOGETHER

BUYER:DIMITRIS PHONE: 30

CERTIFICATE OF CONFORMANCE

This is to certify that all items noted above were produced in conformance with the contract, drawing specifications, and other applicable documents. All required process certifications, chemicals and physical test reports are on file subject to examination. This document must not be reproduced except in full and relates only to the items tested.

Christopher Fredrickson
CHRISTOPHER FREDRICKSON
Quality Manager
Fullerton Operations

ALCOA GLOBAL FASTENERS, INC.

Kaynar Products: Cage Code 15653 • Eagle Products: Cage Code 66776 • Rosan Products: Cage code 66776

ALL CLAIMS REGARDING THIS ORDER MUST BE REPORTED TO SELLER PROMPTLY. CLAIMS FOR CREDIT OR REPLACEMENT OF PARTS MAY BE LIMITED TO THOSE PARTS FOR WHICH TRACEABILITY HAS BEEN MAINTAINED BY THE BUYER. THE SELLER'S MANUFACTURING LOT IDENTIFICATION NUMBER AND RETURN MERCHANDISE AUTHORIZATION (RMA) NUMBER MUST ACCOMPANY ALL RETURNS. ANY CLAIM BASED ON AN ALLEGED DISCREPANCY IN QUANTITY, QUALITY, ETC. BETWEEN THE GOODS ACTUALLY SHIPPED AND/OR DELIVERED UNDER THESE DOCUMENTS AND THE DESCRIPTION THEREOF IN THESE DOCUMENTS, MUST BE MADE IN WRITING TO SELLER NOT LATER THAN NINETY (90) DAYS AFTER THE SHIPPING DATE APPEARING HEREON. FOR ITEMS CERTIFIED TO BPS-N-70, ALLOY VERIFICATION HAS BEEN PERFORMED ON PARTS WITH A DATE OF MANUFACTURE ON OR AFTER JANUARY 1, 2001. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

CUSTOMER'S COPY

Alcoa Fastening Systems



Packing Slip



Packing Slip: 9947956121

Page: 2

Bill To: 5574
M & M AEROSPACE
HARDWARE, INC.
P.O. BOX 025263
MIAMI FL 33102-5263
USA

Ship To: (1)
M & M AEROSPACE
10000 N.W. 15TH TERRACE
MIAMI FL 33172

From:
ALCOA FASTENING SYSTEMS
AEROSPACE PRODUCTS
FULLERTON OPERATIONS
800 SOUTH STATE COLLEGE
FULLERTON CA 92831
USA

Order Contact:

Pack Date Order # Cust PO

Ship Via

Weight Pkgs #

09/10/09 F296602 OEV656

Line/Rel	Item	U/M	Qty Ordered	Qty To Pack
----------	------	-----	-------------	-------------

5-592-5155
"MATERIAL COMPLIES WITH DFARS 252.225-70
14 REQUIREMENTS, "PREFERENCE FOR
DOMESTIC SPECIALTY METALS" WITH ITS ALTE
RNATE 1 APPLIES.
****ALLOWABLE SHIPPING TOLERANCE = +5%-1
0% ***** CHEM & PHYS & MFG C OF C
REQ "MUST STATE COUNTRY OF ORIGIN WHERE
PARTS WERE MANUFACTURED ON
CERTIFICATION FOR EACH LOT NUMBER" ALL I
TEMS ON THIS PO MUST BE NEW AND TO
THE LATEST REV MFGS NAME & LOT# MUST APP
EAR ON PACKING SLIP ON ALL PAPER
WORK FOR ALL ITEMS.

***** IF UNDER
150 # SHIP VIA FED EX GROUND SERVICE: BI
LL RECIPIENT ACCT: 0331-0149-0. IF
OVER 150 # USE FED X NAT'L(WATKINS) ACCT
018757. CUST REF: MUST BE THEIR

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Fullerton Operations

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Alcoa Fastening Systems



Packing Slip



Packing Slip: 9947956121

Page: 3

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HARDWARE, INC.
P.O. BOX 025263
MIAMI FL 33102-5263
USA

Ship To: (1)
M & M AEROSPACE
10000 N.W. 15TH TERRACE
MIAMI FL 33172

From:
ALCOA FASTENING SYSTEMS
AEROSPACE PRODUCTS
FULLERTON OPERATIONS
800 SOUTH STATE COLLEGE
FULLERTON CA 92831
USA

Order Contact:

Pack Date	Order #	Cust PO	Ship Via	Weight	Pkgs #
09/10/09	F296602	OE656			

Line/Rel	Item	U/M	Qty Ordered	Qty To Pack
----------	------	-----	-------------	-------------

PO. # "DO NOT PREPAY & ADD TO ANY OF THE
ABOVE METHODS" & "CONSOLIDATE
SHIPMENTS WHERE EVER APPROPRIATE" DO NOT
SHIP PARTS BY ANY OTHER CARRIER
THAN THOSE LISTED ABOVE, WITHOUT PROPER
WRITTEN AUTHORIZATION FROM M&M.
ECCN OR ITAR AND SCHEDULE B NUMBERS ARE
REQUIRED ON PACKER AND
CERTIFICATIONS.
chem & phys certs

CERTIFICATE OF CONFORMANCE

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CUSTOMER'S COPY

**Alcoa
Fastening
Systems**

Aerospace Products
Fullerton Operations
800 S. STATE COLLEGE BLVD
FULLERTON, CA 92831

TEST REPORT

8136846

Lot No.

5318802-000

Supplier Item No.
BG5500

Supplier Part No.
F5031-3BC

Interchange Part No.
BACN10JR3CFR Rev. AB

Interchange Part No.
F5031-3BC

Interchange Part No.
MS21060-3K Rev. NEW

Interchange Part No.
NAS1031C3K Rev. 6

Interchange Part No.
NAS686C3K Rev. 13

Interchange Part No.

Manufactured Quantity
30015

Mfg. Date

Generic Description
NUT ANCHOR TWO LUG

Thread Size

Performance

BPS-N-70 CL 125TC9

PERFORMANCE

NASM25027

Material Spec. # 1
AMS 5525-J

Mill Heat No.
557119

Control Heat No.
AA15474B

Material Supplier
CARPENTER TECHNOLOGY CORP

Material Spec. # 2
AMS 5525-J

Mill Heat No.
556462

Control Heat No.
AA15581B

Material Supplier
CARPENTER TECHNOLOGY CORP

Special Process Requirements:

THREADS AND GAUGING PER AS8879 AND
ANSI B1.3M SYS. 22
MIN EQUALS BKWY MAX EQUALS INST.
MAGNETIC PERMEABILITY LESS THAN 2.0

TEST RESULTS

TEST No. Description	JOM	SAMPLE Number	RESULT Cycle	MINIMUM Value	MAXIMUM Value	PASS/ Fail	MINIMUM Requirement	MAXIMUM Requirement
1 - 070 TORQUE-OUT	LBS	1	1	60.00			60.00	
		2	1	60.00				
		3	1	60.00				
		4	1	60.00				
		5	1	60.00				
		6	1	60.00				
		7	1	60.00				
		8	1	60.00				
		9	1	60.00				
		10	1	60.00				
		11	1	60.00				
		12	1	60.00				
		13	1	60.00				
		14	1	60.00				
		15	1	60.00				
2 - 080 PUSH-OUT	LBS	1	1	100.00			100.00	
		2	1	100.00				
		3	1	100.00				
		4	1	100.00				
		5	1	100.00				
		6	1	100.00				
		7	1	100.00				

TEST RESULTS - Continued on next page.

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Christopher J. Frickson
CHRISTOPHER J. FRICKSON QA MGR.

**Alcoa
Fastening
Systems**

 Aerospace Products
 Fullerton Operations
 800 S. STATE COLLEGE BLVD
 FULLERTON, CA 92831

TEST REPORT

 NO.
 8136846

 Lot No.
 5318802-000

 Supplier Item No.
 BG5500

 Supplier Part No.
 F5031-3BC

TEST RESULTS - Continued from previous page.

TEST No. Description	UOM	SAMPLE Number	RESULT Cycle	MINIMUM Value	MAXIMUM Value	PASS/ Fail	MINIMUM Requirement	MAXIMUM Requirement
		8	1	100.00				
		9	1	100.00				
		10	1	100.00				
		11	1	100.00				
		12	1	100.00				
		13	1	100.00				
		14	1	100.00				
		15	1	100.00				

Component # 1	Lot Number 5312326-000	Supplier Part No. F5031-3BCFB	Supplier Item No. BG5510
-------------------------	----------------------------------	-----------------------------------------	------------------------------------

Manufactured Quantity	Mfg. Date 06/20/09	Generic Description BASKET	Thread Size
-----------------------	------------------------------	--------------------------------------	-------------

HEAT TREAT AMS-H-6875	PLATE/COAT AMS-QQ-P-35/AMS 2700	LUBRICATION PS308 REV 1
---------------------------------	-------------------------------------------	-----------------------------------

Material Spec. # AMS 5525-J	Mill Heat No. 557119	Control Heat No. AA15474B	Material Supplier CARPENTER TECHNOLOGY CORP
---------------------------------------	--------------------------------	-------------------------------------	-------------------------------------------------------

Component # 2	Lot Number M007542-000	Supplier Part No. F5031-3XN	Supplier Item No. BG5570
-------------------------	----------------------------------	---------------------------------------	------------------------------------

Manufactured Quantity	Mfg. Date	Generic Description NUT ELEMENT	Thread Size .1900-32
-----------------------	-----------	-------------------------------------------	--------------------------------

PLATE/COAT AMS 2410	HEAT TREAT AMS-H-6875	NON-DESTRUCT ASTM E1417 SAMPLE	PERFORMANCE BPS-N-70 CL 12STC9
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PERFORMANCE NASM25027			
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Material Spec. # AMS 5525-J	Mill Heat No. 556462	Control Heat No. AA15581B	Material Supplier CARPENTER TECHNOLOGY CORP
---------------------------------------	--------------------------------	-------------------------------------	-------------------------------------------------------

TEST RESULTS

TEST No. Description	UOM	SAMPLE Number	RESULT Cycle	MINIMUM Value	MAXIMUM Value	PASS/ Fail	MINIMUM Requirement	MAXIMUM Requirement
T-010 TORQUE TEST 18 lbs max. 2.0 lbs min. (1,7 and 15 TORQUE TEST BOLT CHAR: NAS9603	IN#	1	1	14.60	15.60		2.00	18.00
			7	14.40	14.00			
			15	15.30	16.90			
		2	1	9.50	11.70			
			7	12.90	13.70			
			15	12.50	13.70			
		3	1	9.80	11.20			
			7	11.10	12.60			
			15	13.40	15.20			
		4	1	10.60	10.90			

TEST RESULTS - Continued on next page.
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 CHRISTOPHER J. FRICKSON QA MGR.

**Alcoa
Fastening
Systems**

 Aerospace Products
Fullerton Operations
800 S. STATE COLLEGE BLVD
FULLERTON, CA 92831

TEST REPORT

Lot No.

5318802-000

Supplier Item No.
BG5500Supplier Part No.
FS031-3BC
TEST RESULTS - Continued from previous page.

TEST No. Description	UOM	SAMPLE Number	RESULT Cycle	MINIMUM Value	MAXIMUM Value	PASS/ Fail	MINIMUM Requirement	MAXIMUM Requirement
2 - 012 TORQUE TEST 18 lbs max. 2 lbs min. (1,7, and 15) TORQUE TEST BOLT CHAR: NAS6703U, BACB30LM3U	IN#	5	7	5.10	5.30		2.00	18.00
			15	11.40	12.10			
			1	12.90	14.60			
		6	7	5.80	6.10			
			15	4.50	5.30			
			1	12.90	14.10			
		7	7	12.20	13.40			
			15	3.90	3.90			
			1	12.20	13.50			
		8	7	11.80	11.60			
			15	6.10	7.00			
			1	14.50	16.60			
		9	7	10.40	10.60			
			15	3.90	4.80			
			1	11.70	12.90			
		10	7	8.60	8.10			
			15	4.00	4.70			
			1	10.00	12.30			
		1	7	11.40	12.90			
			15	9.00	9.60			
			1	4.90	6.70			
		2	7	5.00	5.90			
			15	4.70	5.30			
			1	6.00	7.10			
		3	7	6.20	7.80			
			15	6.20	6.20			
			1	5.10	7.60			
		4	7	6.00	6.80			
			15	4.70	5.50			
			1	5.60	8.50			
		5	7	8.30	9.30			
			15	7.40	7.70			
			1	5.30	7.10			
		6	7	5.60	5.80			
			15	4.30	4.90			
			1	5.60	7.30			
		7	7	6.40	7.40			
			15	4.30	4.70			
			1	5.30	6.80			
			7	6.70	6.70			

TEST RESULTS - Continued on next page.
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CHRISTOPHER J. FREDRICKSON QA MGR.

**Alcoa
Fastening
Systems**

Aerospace Products
Fullerton Operations
800 S. STATE COLLEGE BLVD
FULLERTON, CA 92831

TEST REPORT

NO.

Page 4 of 5

8136846

Lot No.

5318802-000

Supplier Item No.
BG5500Supplier Part No.
FS031-3BC

TEST RESULTS - Continued from previous page.

TEST No. Description	UOM	SAMPLE Number	RESULT Cycle	MINIMUM Value	MAXIMUM Value	PASS/ Fail	MINIMUM Requirement	MAXIMUM Requirement
3 - 020 TENSILE TEST 2825 lbs min per spec.	LBS	8	15	4.90	5.30		2825.00	
			1	5.40	7.70			
			7	6.40	7.20			
		9	15	5.40	6.50			
			1	4.80	6.00			
			7	5.30	6.40			
		10	15	4.10	4.80			
			1	5.50	7.00			
			7	6.80	7.70			
		11	15	4.60	4.40			
			1	5.20	6.70			
			7	7.50	8.00			
		12	15	5.80	6.50			
			1	4.90	6.40			
			7	5.30	5.90			
		13	15	6.40	6.60			
			1	6.50	7.20			
			7	5.50	5.90			
		14	15	6.10	6.50			
			1	6.10	6.50			
			7	4.80	5.10			
		15	15	5.30	5.80			
			1	5.60	6.40			
			7	5.30	6.20			
			15	6.50	6.90			
			1	3590.00				
			2	2980.00				
			3	2980.00				
			4	2980.00				
			5	2980.00				
			6	2980.00				
			7	2980.00				
			8	2980.00				
			9	2980.00				
			10	2980.00				
			11	2980.00				
			12	2980.00				
			13	2980.00				
			14	2980.00				
			15	2980.00				

TEST RESULTS - Continued on next page.

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CHRISTOPHER J. FREDRICKSON QA MGR.

**Alcoa
Fastening
Systems**Aerospace Products
Fullerton Operations
800 S. STATE COLLEGE BLVD
FULLERTON, CA 92831**TEST REPORT**

8136846

Lot No.

5318802-000

Supplier Item No.
BG5500Supplier Part No.
F5031-3BC**TEST RESULTS - Continued from previous page.**

TEST No. Description	UOM	SAMPLE Number	RESULT Cycle	MINIMUM Value	MAXIMUM Value	PASS/ Fail	MINIMUM Requirement	MAXIMUM Requirement
4 - 110 HARDNESS HRC 38-44 (per drawing)	RC	1	1	42.00	43.00			

Component # 3	Lot Number 5314646-000	Supplier Part No. MS300 .032 X .750 STRIP	Supplier Item No. 222619
-------------------------	----------------------------------	-----------------------------------------------------	------------------------------------

Manufactured Quantity	Mfg. Date 07/08/09	Generic Description	Thread Size
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Material Spec. : AMS 5525-J	Mill Heat No. 556462	Control Heat No. AA15581B	Material Supplier CARPENTER TECHNOLOGY CORP
---------------------------------------	--------------------------------	-------------------------------------	-------------------------------------------------------

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CHRISTOPHER J. FREDRICKSON QA MGR.

CERTIFICATE OF TESTS

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

CERT SERIAL# 000691193

**CARPENTER**

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

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- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

05/27/09

CUSTOMER/BESTELLER/CLIENT

SELLER/VERKAUFER/VENDEUR PAGE 1 OF 2

ALCOA FASTENING SYSTEMS
FULLERTON OPERATION

P O BOX 3001
FULLERTON

CA 92631

RAN

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
220383955	W50448	05/27/09	10022.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULÉE: 557119

AA15474B

PRODUCT DESCRIPTION: CONSUMET A286 COLD FINISH SOLUTION ANNEALED
PART NUMBER: 221419

SPECIFICATION: AMS 5525 REV J (08/ /07)
FAIRCHILD MS 300 REV 7 (01/17/03)
FAIRCHILD MS 550 REV 2 (12/10/02)

SIZE 0.750000 X 0.020000 IN. (19.05 X 0.51 MM) FLT STP

PRIMARY HEAT CHEMISTRY (WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (OES)	MN (XRF)	SI (XRF)	P (OES)	S (OES)	CR (XRF)
0.05 ✓	0.33 ✓	0.14 ✓	0.018 ✓	0.0005 ✓	13.84 ✓
NI (XRF)	MO (XRF)	CU (XRF)	CO (XRF)	AL (OES)	TI (OES)
24.24 ✓	1.19 ✓	0.13 ✓	0.16 ✓	0.15 ✓	2.12 ✓
V (XRF)	B (OES)				
0.24 ✓	0.0065 ✓				

THE CHEMICAL ANALYSIS OF THIS HEAT HAS BEEN PERFORMED BY THE CARPENTER
SPECIALTY ALLOYS CHEMICAL LABORATORY, (CODE NUMBER PRI 100004), WHICH WAS
ACCREDITED TO THE ISO/IEC 17025.

HARDNESS AS SHIPPED, HRBW

82 ✓

BEND TEST - SATISFACTORY

TENSILE STRENGTH, KSI (MPA)
ELONGATION IN 2.00", %

98.5 (679)
36.0

GRAIN SIZE PER ASTM E112: 10 (KALLINGS)

6-3-09 1624

CONTINUED ON NEXT PAGE

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SHIPPER#: 9947956121

CERTIFICATE OF TESTS

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

CERT SERIAL# 000691193

**CARPENTER**

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

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05/27/09

CUSTOMER/BESTELLER/CLIENT

SELLER/VERKAUFER/VENDEUR PAGE 2 OF 2

ALCOA FASTENING SYSTEMS
FULLERTON OPERATION

P O BOX 3001
FULLERTON

CA 92631

RAN

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
220383955	W50448	05/27/09	10022.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE

557119

CAPABILITY

1325 F (718 C), 16 HR

AIR COOL

HARDNESS

34HRC (7715N)

SMOOTH

STRESS RUPTURE

TEST TEMP

1200 F (649 C)

STRESS, KSI (MPA)

67.5 (465)

TEST DISCONT. @

23.0

YIELD STRENGTH, (0.20 %) KSI (MPA)

122.0 (841)

TENSILE STRENGTH, KSI (MPA)

168.0 (1158)

ELONGATION IN 2.00", %

15.0

MATERIAL PRODUCED ON THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A.
MATERIAL HAS BEEN MELTED IN USA OR QUALIFYING COUNTRY TO DEARS REQUIRE-
MENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1.
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REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH
3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE
IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS.

DAWN E. BOSCH
MET RELEASE/REQUIREMENTS ANALYST
CARPENTER TECHNOLOGY CORPORATION

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CERTIFICATE OF TESTS

CERT SERIAL# 000674962

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ALCOA FASTENING SYSTEMS
FULLERTON OPERATION
P O BOX 3001
FULLERTON, CA 92631

CARPENTER TECHNOLOGY CORP

101 W. BERN STREET
READING, PA 19601

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
220395063	LOS250801 L23526	07/01/09	3494.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE:

556462

AA155818

PRODUCT DESCRIPTION: CONSUMET A286 COLD FINISH SOLUTION ANNEALED

SPECIFICATION: AMS 5525 REV J (08/ /07)
FAIRCHILD MS 300 REV 7 (01/17/03)
FAIRCHILD MS 550 REV 2 (12/10/02)

SIZE 8.500000 X 0.032000 IN. (215.90 X 0.81 MM) FLT STP

PRIMARY HEAT CHEMISTRY (WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (OES)	MN (XRF)	SI (XRF)	P (OES)	S (OES)	CR (XRF)
0.04	0.23	0.18	0.020	0.001	13.92
NI (XRF)	MO (XRF)	CU (XRF)	CO (XRF)	AL (OES)	TI (OES)
24.38	1.19	0.11	0.34	0.15	2.18
V (XRF)	B (OES)				
0.26	0.0068				

THE CHEMICAL ANALYSIS OF THIS HEAT HAS BEEN PERFORMED BY THE CARPENTER SPECIALTY ALLOYS CHEMICAL LABORATORY, (CODE NUMBER PRI 100004), WHICH WAS ACCREDITED TO THE ISO/IEC 17025.

HARDNESS AS SHIPPED, HRBW - 83

BEND TEST - SATISFACTORY

YIELD STRENGTH, (0.20 %) KSI (MPA) 49.2 (339)
TENSILE STRENGTH, KSI (MPA) 96.0 (662)
ELONGATION IN 2.00", % 33.0

GRAIN SIZE PER ASTM E112: 10

CAPABILITY

1325 F (718 C), 16 HR AIR COOL

HARDNESS 34HRC (7715N)

SMOOTH STRESS RUPTURE
TEST TEMP 1200 F (649 C)
STRESS, KSI (MPA) 67.5 (465)
TEST DISCONT. @ 23.0

7-7-09

CONTINUED ON NEXT PAGE

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SHIPPER#: 9947956121

CERTIFICATE OF TESTS

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CERTIFICAT DE CONTROLE

CERT SERIAL# 000674962

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SELLER/VERKAUFER/VEHDEURPAGE 2 OF 2

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CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
220395063	LOS250801 L23526	07/01/09	3494.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE:

556462

CAPABILITY

1325 F(718 C), 16 HR

AIR COOL

YIELD STRENGTH, (0.20 %) KSI(MPA) 116.0(800)
TENSILE STRENGTH, KSI(MPA) 166.0(1145)
ELONGATION IN 2.00", % 18.0

MATERIAL PRODUCED ON THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A. MATERIAL HAS BEEN MELTED IN USA OR QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1. CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF SEPTEMBER 2, 2004 TO THE REQUIREMENTS OF ISO 9001:2000 APPROVAL CERTIFICATE 07-0869 BY PERFORMANCE REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH 3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS.

HEIDI L. SUNDAY
MET RELEASE/REQUIREMENTS ANALYST
CARPENTER TECHNOLOGY CORPORATION

222696

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SHIPPER#: 9947956121



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO25150

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
18	12	EA	NAS509-6C		5578	LONG LOK	03038		


Jason Lewis
Vice President of Quality

07/25/14



☒ Bemis Screw Products
20531 S. Belshaw Ave.
Carson, California 90746
Phone: (818) 767-1535
Fax: (818) 767-0439

☐ 10630 Chester Rd.
Cincinnati, Ohio 45215
Phone: (513) 772-1880
Fax: (513) 772-1888

☐ 20501 S. Belshaw Ave.
Carson, California 90746
Phone: (424) 213-4570
Fax: (424) 213-4584

☐ A&W Screw Machine
20531 S. Belshaw Ave.
Carson, California 90746
Phone: (818) 767-1535
Fax: (818) 767-0439

CERTIFICATE OF CONFORMANCE

Purchase Order No.: 0NLH49 Long-Lok S/O (Job) No.: BR3522

Customer: B/E AEROSPACE, INC. Part No.: NAS509-6C REV. 7

Long-Lok Part Number: N/A

Part Description: NUT

DPAS Rating: N/A Contract Number: N/A

Line Item (per P.O.) #: 001 Lot #: 5578

Site Specific Code #: 40630 Heat #: 970245

Purchase: L.T.A # N/A

☒ Material purchased for this order is in compliance with DFAR 252.225-7009, 7014 as per the applicable purchase order. ☐ DFAR's Material Not Applicable

Process:

☐ Long-Lok Strip (Nylon: Type 'L') ☐ Dri Loc Type of Material

☐ Long-Lok Strip (Kel-F: Type 'L') ☐ Dyna Thred

☐ Poly-Lok Patch (Type 'P') ☐ Omni-Lok

☒ Non-Locking ☐ T-Sert

☐ Other (Pellet: Type 'N') ☐ Hot Lok

Basic Part: ☐ Customer Furnished ☒ Complete

Quality System Per: ISO 9001:2008; AS 9100 as revised

Drawing and/or Specification Revision:

		Type	
<input type="checkbox"/> MIL-DTL-18240 Rev. F, (Amd. 1)	<input type="checkbox"/> L	<input type="checkbox"/> P	<input type="checkbox"/> N
<input type="checkbox"/> MIL-F-18240 Rev. E	<input type="checkbox"/> L	<input type="checkbox"/> P	<input type="checkbox"/> N
<input type="checkbox"/> MIL-F-18240 Rev. D, (Amd. 1)	<input type="checkbox"/> L	<input type="checkbox"/> P	<input type="checkbox"/> N
<input type="checkbox"/> NAS 1283:	<input type="checkbox"/> L	<input type="checkbox"/> P	
<input type="checkbox"/> NASM 25027	Rev.: <input type="checkbox"/>		
<input type="checkbox"/> IFI: <input type="checkbox"/> 124	<input type="checkbox"/> 125	<input type="checkbox"/> 524	<input type="checkbox"/> 525
<input type="checkbox"/> MIL-F-8961: <input type="checkbox"/>			
<input checked="" type="checkbox"/> Print #: <u>NAS509</u>	Rev.: <input checked="" type="checkbox"/> 7		
<input type="checkbox"/> Other: _____			

Sampling Plan:

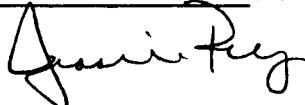
<input type="checkbox"/> Long-Lok Sample Plan (MIL-DTL-18240)	<input type="checkbox"/> SPOC 128
<input checked="" type="checkbox"/> ANSI/ASQC Z1.4-1993	<input checked="" type="checkbox"/> 1.0 AQL Lvl I
<input type="checkbox"/> 100% Inspected	<input type="checkbox"/> 0.65 AQL Lvl II
<input type="checkbox"/> Other _____	<input type="checkbox"/> 0.40 AQL Lvl III

Quantity: 2,300 Quantity Inspected: 50

The material comprising this purchase order has been subjected to, and passed, all examinations and test required by the contract, and the material meets the drawing specification and/or other requirements specifically stated in the purchase order. Test reports covering this material are on file subject to examination. All parts are processed "Mercury Free".

Manufacturing Country of Origin: USA

Name: JESSICA REYES Title: QUALITY ASSURANCE SUPERVISOR Date: 10/31/2013

 10/31/13



RICHBURG, SC

CERTIFICATE OF CONFORMANCE

Customer: LONG-LOK FASTENERS CORP.

Date: 06/17/2013

PAGE 1 of 1

Customer PO# BR5970

RA #: R02842

We certify that the material supplied by Rolled Alloys on the above referenced purchase order was processed in accordance with the quality assurance program and procedures approved under our ISO 9001:2008/AS9100 Rev C Certificate. Our records indicate that the material(s) and test report(s) meet the requirements of the purchase order and applicable specifications. The material test reports comply with the requirements of EN 10204:2004 paragraph 4.1, for a Type 3.1 inspection certificate. The materials supplied with this order were produced without known contact to mercury.

Description

9/16" HEX BAR A286 AMS 5737

35 PC X 144"

Heat - Tracer#

970245 - 288381




Adam Schwartz, RA Quality Assurance

High quality standards are supported by our ISO 9001:2008/AS9100 Rev C Certification

CERTIFICATE OF TESTS
CERT SERIAL# 000873042

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE



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05/02/13

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SELLER/VERKÄUFER/VENDEUR PAGE 1 OF 3

DUN

CUSTOMER ORDER NO./BESTELL.-NR./N° DE COMMANDE

CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE

DATE/DATUM/DATE

WEIGHT/GEWICHT/POIDS

R01086-003

W75434

05/02/13

1570.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE :

970245

UNS NUMBER S66286

PRODUCT DESCRIPTION: A286 SOLUTION ANNEALED AGED COLD DRAWN

SPECIFICATION: AMS 5737 REAFFIRMED REV P (07/ /12)

ASTM-A638-10 GRADE 660, TYPE 1
ASME-SA638 GRADE 660, TYPE 1 2010 EDITION
ASTM-A453-12 GRADE 660 CLASS A
ASME-SA453 GRADE 660 CLASS A 2010 EDITION
GE S-400 (10/15/12)
GE S-1000 (11/01/12)
EN 10204 (10/ /04)
DFARS 1998 EDITION

SIZE 0.562500 IN. (14.29 MM) HEX BAR

PRIMARY HEAT CHEMISTRY (WT%) :

C	MN	SI	P	S	CR
0.03	0.19	0.01	0.016	LT .001	14.02
NI	MO	CU	CO	AL	TI
24.88	1.28	0.10	0.06	0.23	2.22
V	B				
0.25	0.006				

GEAG SUPPLIER CODE - 21100/CARPENTER
GEAG SUPPLIER CODE - T4314/LATROBE

INSPECTION CERTIFICATE 3.1 IN ACCORDANCE WITH EN 10204 AND DIN 50049

ENCLOSED MATERIAL WAS 100% ALLOY ID TESTED AT FINAL PACKAGING

MILL HEAT TREATMENT:

TYPE	SOLUTION ANNEAL	AGE
TEMP	1650F (899C)	1328F (720C)
TIME (BATCH FURNACE)	2.00 HOURS	16.00 HOURS
QUENCH	WATER	AIR

HARDNESS AS SHIPPED 320HBW (35HRC)

HOT REDUCTION RATIO 538 TO 1

CONTINUED ON NEXT PAGE

ROLLED ALLOYS QUALITY ASSURANCE
APPROVED *K. Ray*
DATE 5-6-13

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SELLER/VERKÄUFER/VENDEUR PAGE 2 OF 3

DUN

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
R01086-003	W75434	05/02/13	1570.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE:

970245

UNS NUMBER S66286

COMBINATION STRESS RUPTURE
TEST TEMP 1200 F (649 C)
STRESS, KSI (MPA) 65.0 (448)
ELONGATION % 25.3
HOURS 80.4

AFTER MINIMUM TIME UNDER SPECIFIED STRESS, THE STRESS RUPTURE TEST
WAS OVERLOADED IN INCREMENTS AS FOLLOWS:

TOTAL HOURS	STRESS KSI (MPA)
52	70.0 (483)
61	75.0 (517)
69	80.0 (552)
77	85.0 (586)

(T) TRANSVERSE (L) LONGITUDINAL	L
YIELD STRENGTH, (0.20 %) KSI (MPA)	139.0 (958)
TENSILE STRENGTH, KSI (MPA)	175.0 (1207)
ELONGATION IN 2.00", %	20.0
REDUCTION OF AREA, %	43.0

GRAIN SIZE PER ASTM E112: 7 (KALLINGS)

COMBINATION STRESS RUPTURE
TEST TEMP 1200 F (649 C)
STRESS, KSI (MPA) 56.0 (386)
ELONGATION % 27.8
HOURS 143.6

AFTER MINIMUM TIME UNDER SPECIFIED STRESS, THE STRESS RUPTURE TEST
WAS OVERLOADED IN INCREMENTS AS FOLLOWS:

TOTAL HOURS	STRESS KSI (MPA)
101	61.0 (421)
109	66.0 (455)
117	71.0 (490)
125	76.0 (524)
133	81.0 (558)
141	86.0 (593)

MATERIAL HAS BEEN MELTED IN USA OR QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 252.872.1, SUPERSEDED BY DFARS REQUIREMENTS DFARS 252.225-7008 AND 252.225-7009.

CONTINUED ON NEXT PAGE

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CERT SERIAL# 000873042

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CERTIFICAT DE CONTROLE



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CUSTOMER/BESTELLER/CLIENT

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MI 48182

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SELLER/VERKÄUFER/VENDEUR PAGE 3 OF 3

DUN

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERIE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
R01086-003	W75434	05/02/13	1570.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE :

970245

UNS NUMBER S66286

THIS ORDER WAS MANUFACTURED IN ACCORDANCE WITH CARPENTER SPECIALTY ALLOYS OPERATIONS QUALITY PROGRAM MANUAL, REVISION 30 DATED 09/28/11.

CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF NOVEMBER 24, 2010 TO THE REQUIREMENTS OF ISO 9001:2008 APPROVAL CERTIFICATE 10-1385R BY PERFORMANCE REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH 3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS, AS DOCUMENTED IN THIS CERTIFICATE OF TESTS.

TEST METHODS ARE PER THE ASTM STANDARDS ON FILE AND IN EFFECT AT TIME OF ORDER ACCEPTANCE, STANDARD PRACTICES, OR AS AGREED UPON BETWEEN CARPENTER & CUSTOMER.

JASON M RAYMOND
ADMINISTRATOR - QUALITY
CARPENTER TECHNOLOGY CORPORATION

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Element Materials Technology
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TEST CERTIFICATE — EAR-CONTROLLED DATA

Date: 9/27/2013
Purchase Order Number: BR6452
Work Order Number: LON001-09-26-47354-1

Part No.:	NAS509-6C REV. 7
S/O:	BR3522
Lot#:	5538
Heat#:	970245
Specification:	NAS509-6C REV. 7, FF-N-836 REV.E
Material:	A286
Qty:	3200

MAGNETIC PERMEABILITY

Quantity Tested:	11
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Testing was performed in accordance with MIL-I-17214 and ASTM A 342. The samples shall be less than 2.0 Mu for a field strength of H=200 oersteds.

Result:	< 1.01 Mu
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MATERIAL CONFORMS TO SPECIFICATION

This document contains technical data whose export and re-export/ retransfer is subject to control by the U.S. Department of Commerce under the Export Administration Act and the Export Administration Regulations. The Department of Commerce's prior written approval may be required for the export or re-export/retransfer of such technical data to any foreign person, foreign entity or foreign organization whether in the United States or abroad.

Respectfully submitted

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Aja Moog
Quality Administrator

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